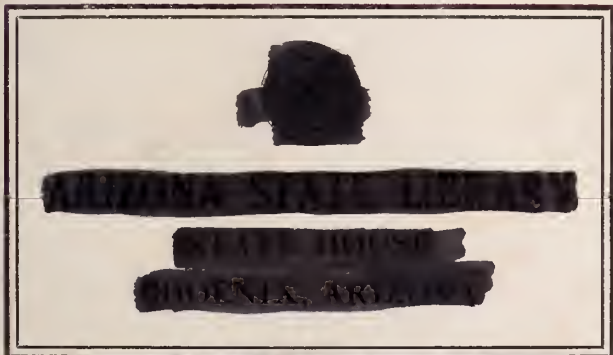


ED 2/1.1/1897-98
C.2



COLORADO STATE PUBLICATIONS LIBRARY



3 1799 00107 2909



OFFICE OF
SUPT. OF PUBLIC INSTRUCTION,
PHOENIX, ARIZ.

RECEIVED

DEC 10 1993

COLORADO STATE LIBRARY
State Publications Library



Digitized by the Internet Archive
in 2016

ED 2/1.1/1897-70
C.2

ELEVENTH BIENNIAL REPORT
OF THE
Superintendent of Public Instruction
OF THE
STATE OF COLORADO
DECEMBER, 1898
To the Governor



DENVER, COLORADO:
THE SMITH-BROOKS PRINTING CO., STATE PRINTERS
1898

C7192
1896/98

OFFICE OF THE
State Superintendent of Public Instruction
1897-1899

GRACE ESDY PATTON
Superintendent of Public Instruction and Ex-Officio State Librarian

MARY HOLLAND KINKAID
Assistant Superintendent of Public Instruction

HATTIE E. STEVENSON
Assistant State Librarian

ELLA B. HOSICK
Clerk and Stenographer in the Office of the Superintendent of Public Instruction

State Board of Education

1897-1899

GRACE ESDY PATTON

Superintendent of Public Instruction

4

CHARLES H. S. WHIPPLE

Secretary of State

BYRON L. CARR

Attorney General

LETTER OF TRANSMITTAL.

STATE OF COLORADO
OFFICE OF
THE SUPERINTENDENT OF PUBLIC INSTRUCTION.

Denver, November 15, 1898.

To His Excellency,

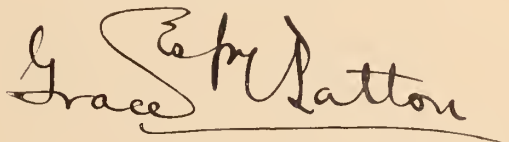
Hon. Alva Adams,

Governor of the State of Colorado.

Sir— I have the honor to submit herewith the
Eleventh Biennial Report of the Superintendent of Public
Instruction for the two years ending June 30, 1898.

Very respectfully,

Your obedient servant,

A handwritten signature in cursive script, reading "Grace E. Patton". The signature is written in dark ink and is positioned above a horizontal line.

Superintendent of Public Instruction.

INTRODUCTION.

Colorado possesses a population distinguished for its remarkably high percentage of educated men and women. In territorial days, the remoteness of the Rocky mountains prevented all but the most enterprising pioneers from seeking their fortunes in a region separated from both coasts by mountains and desert lands. The discoveries of gold attracted men of every profession, the best representatives from all the states in the Union. These men, in building cities and preparing for the future, paid first attention to the establishment of schools. From the lands rich in mineral and agricultural resources, such ample provision was made that to-day over 3,000,000 acres are held as school lands. The law-makers did their part toward insuring the best educational advantages, and to-day, on mountain or plain, wherever the parents of ten children desire to form a school district, a teacher is provided and a school house rises in isolated mountains or upon wind-swept prairies.

The fame of Colorado as a health resort has caused hundreds of the most learned men and women of the country to desert their native states and to become citizens, anxious to insure for their children the very best educational advantages. Competition among teachers is exceedingly sharp, as the high scale of salaries attracts the best talent of the country. Added to the ambition cherished by the most loyal residents of Colorado, the commercial spirit, which recognizes the schools as a factor in increasing immigration to the state, encourages the erection of handsome, substantial buildings.

SCHOOL DIRECTORS.

There are 1,500 school districts and nearly 5,000 school directors in Colorado. It is a privilege to pay a tribute to the earnestness, the conscientiousness and the capability of the majority of these men and women, in whom is vested an almost supreme power. In a number of districts, however, there are incumbents absolutely unfitted for the direction of school work. The members of school boards should have a two-fold qualification: business training and a knowledge of educational work. This naturally presupposes at least an ordinary intelligence. The school directors supervise all the work of the teachers, select text-books, and, to a certain extent, dictate the course of study. In addition to this they make all business contracts, build and equip school houses, and have sole charge of valuable property. Yet there are a few secretaries in the state who can not write their names, there are a number of treasurers who can not add a column of figures, and there are presidents unacquainted with the English language. It is not surprising that county superintendents find it impossible to secure records, and that county treasurers are puzzled in their efforts to balance accounts.

The school law outlines, among the powers and duties of school directors, the following: The power to employ and discharge teachers, determine rate of tuition, pay of secretary, fix course of study, select text-books, provide school house and furniture, hold real and personal property in trust, suspend and expel pupils, determine number of months of school, furnish books for indigent children, establish separate high schools, order one-tenth mill levy for library, sell United States or state bonds, to pay district bonds when due, refund bonded indebtedness, issue new bonds in payment of old.

The school directors have more authority than the county superintendent or the state superintendent, and, under the present laws, the taxpayers have no redress in most cases of flagrant mismanagement. A director may

be removed for malfeasance in office, but relief through the courts is slow. A school board may disregard the law and enjoy various illegal perquisites without the least fear of any serious consequences.

The beneficent provisions of the law too often offer temptation to venal citizens. In one district of Colorado, situated in a county that draws large taxes from the railways, a school board of 1897 was composed of a man who acted as president; his wife, who acted as both secretary and treasurer. A 20-year-old son was the district teacher, his younger brother being the one pupil. The family rented the parlor as a school room and charged a high price for fuel. The aggregate income amounted to over \$100 a month.

The letting of contracts and the purchase of supplies offer a good margin for the speculative school board. In the smallest districts John Smith, the lowest bidder on a contract, is too often one of the directors, who can adopt an alias for business use.

The power to employ teachers is one frequently abused in Colorado. Nepotism prevails in many a county. The school teacher is the sister, or cousin, or aunt, of one of the school board. She is engaged because she has influence, and not because she is admirably equipped for her work. The school director's relative who holds a third grade certificate, is appointed, instead of the experienced teacher who has always secured a first grade certificate.

Any effort to improve the public school facilities of Colorado should begin with the curtailing of the powers of school directors, and with an educational qualification that shall make them eligible to office.

RURAL SCHOOLS.

Colorado's rural schools are the pride of the state. They have been acknowledged to be the best conducted of any, east or west, north or south. In mountain

heights and remote valleys they are equally progressive. They command the finest teachers, they are equipped with the most modern apparatus, and they are in touch with the graded schools of the cities.

Although Colorado is a sparsely settled state, and notwithstanding the fact that it is divided by the Rocky mountains, it is possible for every child within its limits to receive an education. While the compulsory law is enforced with strictness, it is not necessary to use persuasion in order to secure faithful attendance.

Teachers notice a wonderful precocity among pupils. The average of intelligence is high. The state colleges receive a large percentage of students from the rural schools.

STATE COURSE OF STUDY.

The state course of study for the public schools of Colorado was prepared in 1890 by a committee of county superintendents, consisting of J. S. Eagleton, S. T. Hamilton, and P. H. Hammond, appointed by the state superintendent of public instruction, and adopted by the State Association of County Superintendents, May, 1890.

In 1893 the course was revised by a committee consisting of S. T. Hamilton, J. P. Jackson, and E. T. Fisher, appointed by the State Association of County Superintendents.

The state course of study was amended in 1895 by a committee consisting of S. T. Hamilton, Chas. W. Bowman, and E. T. Fisher, appointed by the state superintendent.

No changes in the course of study have been made during the present administration.

The dangers of the present course consist in providing too many subjects for the pupils in the grades. The tendency in all school systems is to attempt more than can be successfully accomplished.

PROFESSIONALISM.

The improvement of the public school system of Colorado and the greatest development of the educational possibilities of the state largely depend upon the growth of professionalism among teachers. Twenty years ago teaching was the pastime for young women who were waiting to be married, the makeshift of young men who needed money while studying law or medicine. Within the past decade, a higher recognition has been given to educators, and they have discovered that theirs is a learned profession, demanding the best brains of the country. The teachers have come to a realization of the complex training necessary to the securing of good results. They have earnestly prepared themselves for broader efforts and wiser methods. Parents have been aroused to the responsibility of teachers and they have begun to coöperate with educators.

More than 3,000 teachers are employed by the schools of Colorado. In this immense corps are hundreds who represent the most thorough and most advanced methods of work. The colleges and normal training schools of the East have sent many teachers to the West. The state is cosmopolitan in its population and there are doubtless many advantages accruing from this varied personnel. Two serious mistakes are, however, to be deplored. Scores of teachers come to Colorado for their health: Despite the fact that tuberculosis is known to be a contagious disease, men and women infected with it are employed in nearly every county in the state. Parents are compelled to send their children to a school room, the air of which is tainted with poison. A teacher who is an invalid is unfit to have charge of a school. Even though her illness might be one from which there could be no danger of contagion or infection, her duties require the most perfect health, the most intense vitality. There should be a physical as well as an educational qualification required of teachers.

There is a large class of teachers who cherish an alien spirit while accepting employment in Colorado. They fail to identify themselves with the state of their adoption, and look upon their enforced residence as an unpleasant exile from the more congenial places of their nativity. These men and women can not inspire the best loyalty to the West in the hearts of the pupils who will be the citizens of the future.

Colorado supports a normal training school that stands at the head of institutions of its class. The time has come when it is wiser to employ local teachers, whenever the best qualifications can be secured.

COUNTY TEACHERS' EXAMINATION.

The questions prepared for the county teachers' examination, during the present administration, have been made professional in character, as the design of such examination is manifestly to test the applicant's ability to teach the branches enumerated in the statute. The section of the school law bearing upon teachers' examinations states that the examination is held for those "persons desirous of passing an examination as teachers."

HIGH SCHOOLS VS. GRADES.

Complaint is made, and justly in many cases, that the common school system has become top-heavy. The highest teaching efficiency should be demanded in the kindergarten and grades. It is infinitely more important that the graded schools should be supplied with specialists whose business it is to teach reading, writing, arithmetic, English grammar, and the other branches of the graded school than that the high school pupils should receive their instruction from specialists.

In every community that has acquired the dignity of a high school, the high school building is the hand-

somest and costliest, and the poorly ventilated, poorly equipped buildings are used for the grades and kindergartens, although it is a fact that young children should be surrounded by hygienic conditions as nearly perfect as possible.

TEACHERS.

In many states the advisability of employing a larger proportion of men as teachers has been agitated. The subject is interesting Colorado educators to a limited extent.

There is no doubt that, along certain lines, women must always excel as educators. In the primary grades, where the children need the mother influence, men can not attain success, yet, in my opinion, the children of the public schools are kept too long under the exclusive instruction of women. More men in the grades and more women as high school instructors would greatly increase results. From the fourth or fifth grade, the children should come in contact with men instructors as well as women. In their homes, children are subject to the dual influence of father and mother. The boys and girls can be helped by the same double training in the school room.

NORMAL INSTITUTES.

The state is divided into thirteen normal institute districts, and the statutes make provision for holding successful and profitable teachers' normal institutes. Owing to an oversight on the part of the general assembly, appropriations have not been made, as provided in section 81 of the compiled School Laws of 1897:

"It shall be the duty of the superintendent of public instruction, annually, when the executive committee of any normal institute district shall certify that not less than twenty persons have paid the registration fee, and have received instructions during the session of the

institute, to certify the same to the auditor of state, who shall forward to the custodian of the 'normal institute fund' of such district a warrant on the state treasurer for the sum of fifty dollars, to be paid out of any money appropriated for that purpose."

The normal institute, if properly conducted, is of inestimable value to teachers and those desiring to enter the teaching profession.

If censure may be passed upon the normal institutes as they have been conducted hitherto in Colorado, it is that they have been converted into primary schools, wherein the poorly equipped applicant for a county teacher's certificate may be taught the fundamental principles of reading, writing, arithmetic, grammar, geography, and United States history. The public school system of the state furnishes the necessary means of providing instruction in the common school branches. The design of the teachers' normal institute is not to furnish instruction in the elementary branches that have a place in the public school, but it has for its object the instruction of teachers in methods of teaching.

Fortunately, the custom of making the institute a place for academic work is rapidly becoming obsolete in Colorado.

The county superintendents, recognizing that the way to raise the standard of the schools is to raise the standard of the teaching profession, have endeavored to secure professionalism in the work of the normal institute, and their efforts have been successful.

STATE BOARD OF EXAMINERS.

The State Board of Examiners held meetings on the following dates:

February 20, 1897.

June 11, 1897.

June 16, 1897.

October 30, 1897.

May 7, 1898.

June 14, 1898.

**Circular of Information Issued by the State Board of
Examiners.**

Denver, Colo., July 1, 1897.

For the information of those interested, as much of the school law of Colorado as relates to the granting of state diplomas to teachers is herewith given:

Section 3. The State Board of Education is hereby authorized to grant state diplomas to such teachers as may be found to possess the requisite scholarship and culture, and who may also exhibit satisfactory evidence of an unexceptional moral character, and whose eminent professional ability has been established by not less than two years' successful teaching in the public schools of this state. Such diplomas shall supersede the necessity of any and all other examinations of persons holding the same, by county, city, or local examiners, and shall be valid in any county, city, town, or district in the state, unless revoked by the State Board of Education.

Section 4. But state diplomas shall only be granted upon public examination, of which due notice shall be given, in such branches and upon such terms, and by such examiners as the state superintendent of public instruction, the president of the State University, the president of the State Agricultural College, and the president of the State School of Mines may prescribe; *Provided*, That the State Board of Education may, upon recommendation of the State Board of Examiners, grant state diplomas, without examination, to persons who, in addition to good moral character and scholarly attainments, have rendered eminent services in the educational work of the state for a period of not less than five years.

The State Board of Examiners, under the authority above quoted, makes the following announcements:

The board will meet in the office of the superintendent of public instruction, Denver, Colo., on the second Saturday of June and the second Saturday of December, of each year. Other meetings will be held when, in the judgment of the board, they are necessary.

The next annual examination of candidates for the state diplomas will be held in Denver, August 25, 26 and 27, 1897.

All applications and accompanying papers must be filed in the office of the superintendent of public instruction not later than August 9, 1897.

Candidates for the state diploma are subject to the following named conditions:

1. They shall possess a first class, unexpired county certificate issued in Colorado.

2. They shall pass a satisfactory written examination in each of the following named branches of study: Algebra, geometry, physiology, botany, physics, general history, civil government, including the Constitution of Colorado, English literature and rhetoric, psychology and pedagogy, and Latin, *or* French, *or* German.

3. They shall pass a satisfactory written examination in any three subjects to be selected by them from those herewith named: Trigonometry, astronomy, physical geography, geology and mineralogy, zoölogy, chemistry, logic, and political economy.

Such applicants as have passed a satisfactory examination, before the State Board of Examiners, in any of the subjects before named within two years, will receive full credit therein without further examination.

No one will be recommended to receive the state diploma, without examination, who has not given satisfactory evidence of educational and other qualifications at least equivalent to the highest of those hereinbefore named.

In considering an applicant's claim to a state diploma, either honorary or based upon the examination

tests, the board will give due weight to evidence showing high attainments in special lines of educational work.

Eminent success in filling the positions of principal of high school, superintendent of schools, or professor in some higher institution of learning, will receive due recognition in considering any one's fitness to receive a complimentary state diploma.

State Board of Examiners: Grace Espy Patton, superintendent of public instruction; James H. Baker, president of the State University; Alston Ellis, president of the State Agricultural College; Regis Chauvenet, president of the State School of Mines.

Address all inquiries to

GRACE ESPY PATTON,
Superintendent of Public Instruction, Denver, Colo.

Office of
The Superintendent of Public instruction,
State of Colorado, Denver.

**AN ACT IN RELATION TO THE SALE OR GIFT OF
TOBACCO TO CHILDREN UNDER SIXTEEN YEARS
OF AGE.**

Be it Enacted by the General Assembly of the State of Colorado:

Section 1. Any person who shall sell, give or furnish any tobacco or article made in whole or in part of tobacco, to any child under sixteen years of age, without the written order of the father or guardian of such child, shall be fined in a sum not less than five dollars, nor more than one hundred dollars, or imprisonment in the county jail not more than three months.

Sec. 2. Justices of the peace in their respective precincts shall have jurisdiction to try cases under this act, subject to the right of appeal as in the case of assault and battery.

Sec. 3. Whereas, In the opinion of the general assembly an emergency exists, therefore this act shall take effect and be in force from and after its passage.

Approved April 1st, 1891.

Session Laws of Colorado, 1891 (Criminal Code), page 131.

GRACE ESPY PATTON,
Superintendent of Public Instruction.

March 1, 1897.

CONFERENCE OF STATE SUPERINTENDENTS.

The meeting of the department of superintendence of the National Educational Association met at Chattanooga, Tenn., February 22-24, 1898.

The following was the programme of the conference of state superintendents:

Hon. Grace Espy Patton, state superintendent of public instruction of Colorado, chairman.

February 22.

"The Minimum Preparation for Teaching," Hon. Price Thomas, state superintendent of public instruction, Tennessee. Discussion, Hon. O. T. Corson, state school commissioner, Ohio.

February 23.

"Reciprocal Recognition of State and Normal School Diplomas by the States," Dr. Z. X. Snyder, president State Normal School, Colorado. General discussion.

February 24.

"Medical Examination of Children in the Public Schools," Hon. W. B. Powell, superintendent of schools, District of Columbia. Discussion, Hon. Junius Jordan, state superintendent of public instruction, Arkansas.

COLORADO'S EDUCATIONAL EXHIBIT AT THE TRANS-MISSISSIPPI AND INTERNATIONAL EXPOSITION, OMAHA, NEBRASKA.

The committee on education appointed to prepare an educational exhibit from Colorado for the Trans-Mississippi and International Exposition, held in Omaha, June 1 to November 1, 1898, was composed of the following:

Grace Espy Patton, state superintendent of public instruction, Denver, chairman.

M. L. Allison, Grand Junction.

Jared L. Brush, Greeley.

Charles E. Ward, Denver.

Inasmuch as the progress and prosperity of Colorado is proved by the splendid success of its schools, and as all citizens are interested in advertising the remarkable school system of the state, a creditable exhibit was prepared with comparatively little difficulty on the part of the committee.

Six hundred feet were reserved in the Liberal Arts building, and Colorado's educational exhibit was put in place by Mr. Frank A. Smith, superintendent of the city schools of Grand Junction.

The exhibit was an artistic presentation of the work done by the teachers and pupils of the Colorado public schools, and attracted many visitors and inspired much favorable comment.

EXAMINATION FOR ADMISSION TO THE BAR.

The rules governing admission to the bar of Colorado, adopted September 13, 1897, and amended May 4, 1898, make the following provision:

“(c) Applicants who are not members of the bar, as above prescribed, shall present a thirty count certificate from the regents of the University of the State of New York, or shall satisfy said committee that they graduated from a high school or preparatory school whose standing shall be approved by the committee, or were admitted

as regular students to some college or university, approved as aforesaid, or before entering upon said clerkship or attendance at a law school, or within one year thereafter, or before September 13, 1899, they passed an examination before the state superintendent of public instruction, in the following subjects: English literature, civil government, algebra to quadratic equations, plane geometry, general history, history of England, history of the United States, and the written answers to the questions in the above named subjects shall be examined as to spelling, grammar, composition and rhetoric. The said examinations shall be conducted in connection with the regular county examinations of teachers."

In accordance with such provision, certificates have been issued to L. S. Whitney, Ralph Reed, Arthur S. Phinney, John M. Wardlaw, J. J. Hogan, James McWilliams, L. C. Kinniken, Benjamin Kobey, Robert Bret Harte Harris, James M. Palmer, and George D. Johnson.

The certificate issued from the office of superintendent of public instruction is as follows:

"I,....., superintendent of public instruction of the state of Colorado, do hereby certify, that at an examination conducted by me in connection with the regular county examinations of teachers,duly passed the examination required by rule No. 44, (c), of the rules of the supreme court of the state of Colorado in the following subjects: English literature, civil government, algebra to quadratic equations, plane geometry, general history, history of England, and history of the United States; and that, in determining whether or not the saidpassed said examination, I examined the written answers to the questions in the above named subjects as to the spelling, grammar, composition and rhetoric.

In witness whereof, I have hereunto set my hand and seal of office, this.....day of.....
A. D. 189...

Supt. of Public Instruction."

**COLORADO STATE TEACHERS' READING CIRCLE,
1897-1899.**

Advisory Board—Grace Espy Patton, state superintendent of public instruction; J. H. Hays, assistant principal State Normal School, Greeley; G. L. Harding, county superintendent, Boulder.

Secretary and Manager—J. P. Jackson, superintendent of city schools, Leadville.

Course of Reading for 1897-98 (sixth year)—Winchell's "Walks and Talks in the Geological Field," and Tracy's "Psychology of Childhood."

Course of Reading for 1898-99 (seventh year)—McMurry's "Method of the Recitation," and Comstock's "Insect Life."

No membership fee is assessed, and the sole cost of membership is the price of two books read annually.

Organization—The State Teachers' Reading Circle of Colorado is under the control of an advisory board of three members, with a secretary and manager. All are appointed by the State Teachers' Association. Each county superintendent is made manager of the reading circle in his county, and has supervision of the work in detail, so far as his own county is concerned. All teachers in the state, or persons desiring to become teachers, are eligible to membership. The only requirement made of members is that, under the direction of the county superintendent, they pursue diligently the course of reading as outlined by the state board.

Enrollment Card.—To the county manager: You are authorized to enroll my name as a member of the Colorado Teachers' Reading Circle for..... county, Colorado, and I hereby agree to procure the two books constituting the present year's course of reading, and to read the same carefully and systematically during the year., Teacher.

P. O.

Date.....189..

This card to be filed by the county superintendent.

“Hon. Grace Espy Patton, State Superintendent of Public Instruction, Denver, Colo.:

Dear Madam—Your request in regard to the State Teachers' Reading Circle is at hand.

I have tried to communicate with Mr. J. P. Jackson, secretary of the reading circle, but my letters failed to reach him, and he left no statements or reports of any kind with me.

The organization of the reading circle is as yet imperfect, as it is early in the school year; at least, this is true in my county.

Dick's Educational Directory says the “membership varies from three to five hundred,” the most definite information I have succeeded in obtaining.

In regard to what I know of the work so far this year, I desire to say that the books, Comstock's “Insect Life,” and McMurry's “Method of the Recitation,” cost the teachers \$2 (\$1.25 and \$0.75 respectively). The publishers have made the same arrangements as heretofore to pay all expenses of shipping, permitting the return of unsold books, and allowing the superintendents ten cents on each book sold. In many cases, the superintendent gives the teachers the benefit of this ten cents, making the books cost the teachers \$1.80 for both. The experience of the superintendents is, that if the work is pushed, much credit must be given to the teachers on the books, and some say the ten cents allowance only makes up for losses in bad debts. My personal experience of five years is that I have never lost a cent in this way; no teacher has ever failed to pay for the books. Sometimes I have found it necessary to remind them, and I think where superintendents lose it often results from their own carelessness rather than from dishonesty on the part of any teacher.

In regard to the work this fall, so far as I now know: At the date indicated, I sent the following letter to every superintendent:

Boulder, Colo., June 6, 1898.

'You have no doubt received the printed matter in regard to the reading circle books. I feel that Colorado has not been doing as well as some other states in this work. I sincerely desire a successful year. You, of course, will aid in this. On us, the county superintendents, its success depends. Every teacher in the state should be a member. By urging the matter on the teachers, placing topics from the books among the subjects for discussion at associations, and organizing local circles, you will arouse interest in your county. When visiting schools, I take copies with me, thus saving postage to teachers who desire the books. As heretofore, superintendents are allowed ten cents on each copy sold, and can return unsold books, publishers paying transportation both ways.

GEORGE L. HARDING,
Acting Secretary State Teachers' Reading
Circle.'

Before sending out this letter, and before the printed matter of the circle reached the superintendents, I received a few letters from superintendents inquiring in regard to the reading circle—notably Superintendent Lay, of San Miguel county, and Superintendent Quillian, of Huerfano county. Such letters were promptly answered by me. I also received some replies to my circular letter.

Superintendent Garfield, Washington county, says: 'I shall do what I can to interest the teachers of this county in the reading circle. I think it a very interesting course this year and one from which the teachers will derive a great deal of benefit.'

Superintendent Allen, El Paso county, says: 'I shall do all I can to get the teachers of this county to take up the work.'

Superintendent Dickson, Custer county, says: 'I have received the printed matter and have not lost an opportunity to place it in the hands of the teachers of the county. I am satisfied there is not a resident teacher of this county who belongs to the reading circle.'

Superintendent M. A. Bowman says: 'Acting upon your suggestion, I shall take copies with me when visiting schools.'

Some of the superintendents feel a lack of time to attend to the work and simply suggest to the teachers to send to the publishers and get the books for themselves. The work in such counties is not pushed and the membership is small, and, indeed, any statistics in regard to it are hard to obtain.

In the case of some of the larger counties, I have written to the superintendent to let me know when teachers' meetings will be held, intending to visit them at such time, but the state is too large to do much in that way.

In regard to my own county, in the year 1896-7 the membership was fifty-nine, and had been about the same for some years previous. In 1897-8 the membership fell to thirty-two, the lowest it has been any year since I have been in office. For the present year, so far, it is sixty-two, and I have reason to believe it will reach seventy to seventy-five, as many teachers whose schools I have not yet visited are waiting for me to do so, and then get the books. Local circles, meeting once in two weeks, are formed at Boulder, Louisville, Ward, and steps are being taken to form them at other points in the county. Two subjects for our next Teachers' Association meeting at Boulder, November 18-19, are taken from the reading circle work.

Very truly,

GEO. L. HARDING,
Acting Secretary."

THE STATE BOARD OF EDUCATION.

The cases considered and acted upon by the State Board of Education during the present administration are as follows:

The appeal of Joseph A. Kirk, from the markings of the county superintendent of Kiowa county, at the county

examination for teachers, held in December, 1896, was dismissed.

The appeal of Susie Sease, from the markings of the county superintendent of Pueblo county at the county examination held in December, 1896, was dismissed.

JUAN DE DIOS RUYBAL et al.,

vs.

GEO. W. IRVIN, County Superintendent of
Schools of Conejos County.

This was an appeal from the decision of the county superintendent in refusing to call a meeting for the organization of a new school district under the provisions of section 27 of the Compiled School Laws of 1895.

Said statute provides for the presentation of a petition to be signed by the parents of at least ten children of school age, praying for the organization of a new district, and stating the boundaries thereof, and giving list of the names of children of school age.

When said petition is presented, it is further provided that, "If in the judgment of the county superintendent, the school interests of the districts affected by the proposed change will be best promoted by such change, he shall direct some one of the petitioners, who is a legal voter, to notify each elector residing within the district so to be formed, etc., to attend a meeting at which the question of organizing a new district shall be determined by vote of the electors."

Thus, from the school law, it is evident that the matter is left entirely to the discretion of the county superintendent as to whether or not he will call such meeting, or whether or not the best interests of the district will be promoted by such change; and, it being a matter resting entirely in his discretion, it is the opinion of this board that the matter is not subject to review in any event, unless it appears that there is an absolute abuse of such discretion, which does not appear in this case.

It appearing that the board had no jurisdiction in the case, it was ordered that the appeal be dismissed.

March 20, 1897.

In the matter of the appeal of Victor C. McGirr from the decision of the county superintendent of schools of Dolores county, the following action was taken on the same:

Whereas, The record in this case shows that the appellant was an applicant for a teacher's certificate in Dolores county;

The examination papers show that he passed a satisfactory examination to entitle him to a first grade certificate, but the letter of the county superintendent of schools addressed to the appellant shows that she refused to grant a certificate for the reason that the appellant uses tobacco, "and for that reason alone."

The statutes of this state, School Laws, section 48, provide that, "Any school board shall have the power to make such by-laws for their own government and for the government of the public schools under their charge as they may deem expedient."

There is no doubt whatever of the power of the school boards to employ or to refuse to employ any teacher holding a certificate on account of any personal habits of such teacher, and such matters are not within the jurisdiction of the county superintendent of schools.

In the opinion of this board, the appellant is entitled to a first grade certificate.

It is therefore ordered that the appeal be sustained, the order of the county superintendent reversed, and a first grade certificate issued as provided by the statute.

April 19, 1897.

The appeal of school district No. 16, Bent county, from the decision of George E. McCauley, county superintendent of Bent county, in the case of Mary Sydnor, was dismissed.

The appeal of school district No. 16, Routt county, from the decision of Emma H. Peck, county superintendent of Routt county, in the matter of establishing the census lists of districts Nos. 5 and 16, was dismissed.

January 7, 1898.

The appeal of school district No. 24, Pueblo county, from the decision of Charles W. Bowman, county superintendent of Pueblo county, in the matter of the organization of districts, was dismissed.

The appeal of school district No. 13, Washington county, from the decision of Lou A. Bagley, county superintendent of Washington county, in the matter of the organization of districts, was dismissed.

The appeal of Mary Nash from the markings given by the county superintendent of Phillips county, at the December county examination, was dismissed.

The appeals of Ella M. Allison, Minnie M. Baxter, Anna E. J. Kaufman, William J. Hatch and Mabel C. Rolla, from the markings given by the county superintendent of Arapahoe county, at the December county examination, were dismissed.

January 18, 1898.

The matter of the appeal of J. T. Parlin, secretary school district No. 2, Gunnison county, was presented to the board for consideration, the same being an appeal by the secretary of said district from an order of the county superintendent of said county refusing to accept the annual report of the secretary.

And it appearing from the affidavits and other papers now on file in this matter that the said J. T. Parlin was at all times herein mentioned the secretary of said district;

That the annual report of said district for the year ending August 1, A. D. 1897, was prepared by the appellant and mailed to the county superintendent on August 3, A. D. 1897;

And it also appearing from the original communication of the county superintendent, under date of August 18, A. D. 1897, and addressed to the secretary, that the county superintendent refused to accept the report, for the alleged reason that "the report does not agree

with the county treasurer's books, nor with the statements that he has forwarded to you;"

And it also appearing from the affidavits and papers on file in this case that certain warrants of said district had previously been issued, signed by the president and treasurer of said district, which warrants have been paid by the county treasurer, without the signature of the secretary of said district; that said warrants were not drawn or countersigned by the secretary; that said secretary therefore had no record of said warrants, nor any "register or stub" of said warrants "showing the number of the order, date, amount, in whose favor, and for what purpose drawn," as provided by law; and, for the foregoing reasons, said warrants, although paid by the county treasurer, were not included in the report of the secretary;

And that the alleged discrepancy between the county treasurer's books and statements and the report of the secretary was owing to the fact that said warrants had been paid by the county treasurer, although not drawn or countersigned by the secretary;

And there being, in the opinion of the board, no other question involved in this appeal, and this board being of the opinion that the issue and payment of said warrants was irregular, it is therefore

Ordered that the appeal be sustained, and that the report be accepted by the county superintendent.

The appeal of Bertha Pettys from the markings of the county superintendent of Park county at the December examination was dismissed.

The appeal of C. F. Cunningham from the markings of the superintendent of San Miguel county at the August examination was dismissed.

April 25, 1898.

The appeal of Sarah Ketner from the markings of the county superintendent of Arapahoe county, at the county examination held in March, 1898, it appearing to

the board that the markings in several branches were too low, the appeal was sustained and a third grade certificate ordered issued to the appellant.

June 15, 1898.

In the appeal of John B. Chase from the decision of the county superintendent of Phillips county, in the matter of consolidation of school districts Nos. 1 and 17, Phillips county, the following decision, rendered by Attorney General Byron L. Carr, was ratified by the board:

"I have examined the papers in the matter of the appeal of John Chase from the decision of the county superintendent of schools of Phillips county, and the refusal of the said superintendent of schools to recognize the consolidation of school districts Nos. 1 and 17 of said county, and the refusal of the superintendent of schools to receive the certificate of election of said so-called consolidated school district. It appears from the record that on or about the 1st day of October, 1897, a request was made upon the board of directors to call a special meeting of the electors for the purpose of voting upon the proposition of consolidating the two districts; that the president and treasurer of said board refused to call such special meeting; that afterwards the secretary, who is the appellant in this case, circulated a petition among the electors, requesting the board to call a special meeting for that purpose. The petition was signed by five electors. That on the 10th day of October, 1897, a notice was posted calling an election to be held November 8 for the purpose as specified. Said notice was signed by John Chase, secretary of district No. 17. It appears that said meeting was held at the time specified. It also appears that at said meeting the vote was in favor of uniting said districts. That afterwards a union meeting of the two districts was held, on January 4, 1898, for the purpose of perfecting the organization of the said two districts into one, and that at that meeting Mr. J. R. Gilmore was elected secretary of the meeting, that John Chase was elected treasurer of the district, Peter Hanson

president, and J. R. Gilmore secretary; that on the 10th day of January, 1898, the officers so elected presented their certificates of election to S. H. Johnson, county superintendent of schools, and asked to be sworn in as such officers and qualify according to law; that said Johnson utterly refused to recognize them as such officers, or to take any steps in the premises. The reasons for the refusal of the superintendent to act in the premises, as I view it, clearly appear in the record itself.

"Section 62 of the Compiled School Law provides as follows:

"In any district of the third class, the board of directors may at any time call a special meeting of the electors of such district for any of the purposes specified in section 63 of this act, and it shall be their duty to call such meeting, if petitioned so to do by ten legal voters of the district."

"It appears in this case that a majority of the board refused to call a meeting, and that a petition was presented to them signed by only five legal voters of the district. Such being the situation, the meeting that was held on November 8, 1897, pursuant to the call of the secretary only, was not called in the manner provided by the statute, and was not a legal meeting, and its action did not bind the district, hence the county superintendent of schools was right in his refusal to recognize the officers elected pursuant to a vote of consolidation passed at such meeting."

In the appeal of Catherine High from the decision of the county superintendent of schools of Weld county, refusing to grant a petition for the organization of a new district out of school district No. 23, in said county, the following opinion, rendered by Attorney General Carr, was ratified by the board:

"I have examined the papers in the matter of the appeal of Catherine High from the decision of the county superintendent of schools of Weld county, refusing to grant a petition for the organization of a new district

out of school district No. 23, in said county. It appears by the papers on file that a petition was signed by twenty-three persons representing thirty children of school age, praying for a division of the district and the organization of a new one; and there are sixty-seven pupils, or persons of school age, in the district as at present organized, and that many of the pupils residing in the proposed new district are from two to three miles from the school house. It also appears that there was a protest filed with the superintendent against the organization of the new district, signed by twelve residents of the proposed new district, but it is stated in the statement of appeal that a majority of the protestants are in no way interested in the school, having no children to attend. The statement by the county superintendent is to the effect that it is his judgment, 'A division of the district would tend to lessen school efficiency and probably increase financial burdens as well, and, for these and other reasons, he declines to grant the petition.'

"From my examination of the papers, I am inclined to the view that if I were in the position of the county superintendent of schools, I should grant the petition, but the statutes of this state provide that when petitions of this kind are presented, 'if in the judgment of the county superintendent, the school interests of the districts affected by the proposed change will be best promoted by said change, he shall direct some one of the petitioners, who is a legal voter, to notify each elector residing within the district,' and shall call a meeting to vote upon the question of the proposed new organization. This statute leaves the matter of calling an election for the purpose of voting upon the organization, absolutely within the discretion of the county superintendent of schools, and unless it shall appear in cases of this kind that the superintendent of schools has been guilty of a palpable abuse of such discretion, neither the Board of Education nor any other tribunal should presume to review his action. It appears by the statement of the superintendent of schools that he has examined evidence

concerning the matter, has considered protests and letters for and against the proposed new organization, has personally visited the location and consulted with the people residing in the new district, and I can not see, upon a full review of the statements, that he has in any manner abused the discretion vested in him by the statute. For that reason, I can not see that the Board of Education has any jurisdiction in the premises."

In the appeal of O. F. Barber and A. J. Saunders from a decision of the county superintendent of schools of Routt county, rendered October 1, 1896, in the division of funds between the Maybell and Emerson schools, said county, the following action was taken:

"It appears to the board that there is nothing to give this board jurisdiction in this case, as there is nothing to appeal from. The School Law, section 51, gives the school board authority to determine all questions concerning the employment of teachers, and the time schools shall be taught. The resolution of the board referring the matter to the county superintendent of schools was nothing more than a request for advice in the premises, and would not be made the basis of a binding decision. Even if anything could confer jurisdiction upon the superintendent to decide a question of this kind, which is doubtful, this did not do it. It would seem that the advice given was sound and ought to be followed, but the school board must act in the matter finally. The appeal was ordered dismissed for want of jurisdiction."

The appeal of Lilla M. Graves from the markings of the superintendent of schools of Larimer county, at the March examination, was ordered dismissed.

The appeal of Evalina Frazier from the markings of the superintendent of schools of Chaffee county was dismissed.

H. B. MUNSON, appellant, vs. E. A. LEABO, AL. MOSIER and J. P. BUCKINGHAM, directors of school district No. 54, in Logan county, appellees.

This is an appeal from the decision of the county superintendent of schools of Logan county, revoking the certificate of appellant. The appellant is charged with immoral conduct and drunkenness. The first charge was abandoned and need not be considered.

The second is sought to be supported by *ex parte* affidavits that are inadmissible as evidence, but were admitted by the county superintendent of schools over the objections of the defendant. In admitting these affidavits and considering them the county superintendent erred.

It is not deemed necessary to review the oral testimony. It is entirely insufficient to justify the finding of the county superintendent of schools. The statement made by the defendant is straightforward and sincere and tends to explain all matters that might otherwise cloud his record.

The order of the county superintendent revoking the certificate of the appellant is cancelled and annulled and the appellant restored to all of his rights under said certificate.

In the matter of the appeal of ADAM GARDNER ET AL. from the decision of the county superintendent of schools of Las Animas county, Colorado, refusing to submit the question of the organization of a new district:

The county superintendent of schools, in his reply to the petition, states: "I do not think the school interests of all concerned would be best served by such a division."

The matter of the organization of school districts out of territory already a part of a school district is left by the statutes to the discretion of the county superintendent of schools. Whenever a petition is presented it is the duty of the superintendent to examine the mat-

ter with reference not only to the interests of the petitioners, but with reference to the interests of all parties concerned; and, "if in the judgment of the county superintendent the school interests of the district affected by the proposed change" will be best promoted by the change, he shall direct one of the petitioners to call an election and submit the matter to the qualified electors of the proposed new district.

The above quotation is taken from section 27 of the Compiled School Laws, and the converse of the proposition therein stated is that if in the judgment of the county superintendent of schools the best interests of the parties concerned will not be subserved by the proposed change, then he shall refuse to direct the calling of such an election, and the same being a matter entirely within the discretion of the county superintendent of schools, it is not subject to review by this board or any other tribunal unless it appear that the superintendent of schools has clearly abused the discretion vested in him. It does not appear in this case that there has been any abuse of discretion, hence the Board of Education has no jurisdiction in the premises and the appeal is therefore dismissed.

PERSONS WHO HAVE RECEIVED STATE CERTIFICATES.

Issued Prior to 1891.

H. M. Hale.
Aaron Gove.
Justin E. Dow.
F. J. Annis.
I. C. Dennett.
J. H. Baker.
H. L. Parker.
H. F. Wagener.
Mary Thomas.
Adele M. Overton.

Ira W. Davis.
 A. E. Chase.
 Robert Casey.
 F. E. Smith.
 P. H. Hanus.
 J. C. Shattuck.
 F. B. Gault.
 C. L. Ingersoll.
 W. W. Remington.
 J. S. McClung.
 E. C. Stevens.
 W. C. Thomas.
 Miss N. O. Smith.
 Mrs. Cornelia Miles.
 S. A. Wilson.
 Robert H. Beggs.
 A. B. Copeland.
 Miss A. E. De Lan.
 E. L. Byington.
 Wm. Eisenman.
 J. H. Freeman.
 J. P. Jackson.
 C. V. Parker.
 Miss Atta L. Nutter.
 E. C. Hill.
 J. A. Guttery.
 Mrs. E. K. LaBarthe.
 W. T. Eddingfield.
 A. C. Courtney.
 Grace Espy Patton.
 L. S. Cornell.

Issued in 1891-1892.

Fanny Manly, Denver.
 Benjamin R. Gass, Denver.

Emma E. Maxwell, North Denver.
Ellen Wallace Collins, Georgetown.
James W. Lawrence, Fort Collins.
Alice Biggs, Gunnison.
J. M. Daniels, La Junta.
G. W. Wyatt, Denver.
G. L. Harding, Longmont.
O. S. Moles, Cañon City.
Fred Dick, Denver.

Issued in 1893-1894.

Bell Minor, Cañon City.
T. O. Baker, Durango.
J. H. Allen, Cañon City.
P. M. Condit, Colorado City.
J. S. Eagleton, Golden.
W. V. Corey, Boulder.
N. B. Coy, Denver.
P. H. Hammond, Castle Rock.
Frona Houghan, Denver.
W. H. Smiley, Denver.
L. C. Greenlee, Denver.
J. S. Young, Denver.
J. H. Van Sickle, Denver.
Chas. A. Bradley, Denver.
W. E. Knapp, Denver.
M. E. Eagleton, Littleton.
M. H. Lobdell, Georgetown.
P. K. Pattison, Colorado Springs.
Geo. E. Turnbull, Colorado Springs.
Wm. Triplett, Golden.
A. H. Dunn, Fort Collins.
P. W. Search, Pueblo.
A. L. Penhallow, Colorado City.

Tilman Jenkins, Mosca.

A. J. Floyd, Greeley.

W. H. Eagleton, Golden.

Issued in 1895-1896.

W. A. Haggott, complimentary, Idaho Springs.

A. J. Fynn, complimentary, Alamosa.

J. H. Matthews, complimentary, Black Hawk.

Kate Murphy, examination, Denver.

Hannah M. Curnow, examination, Denver.

Edgar Kisner, examination, Boulder.

Cora M. Carson, examination, Ouray.

Ada G. McClave, examination, Denver.

O. C. Skinner, complimentary, Saguache.

G. E. Osborne, examination, Akron.

Flora E. Haffy, complimentary, Del Norte.

M. D. L. Buell, complimentary, Salida.

E. T. Fisher, complimentary, Grand Junction.

Isabel Halloway, complimentary, Denver.

Jas. W. Ellison, examination, Berkeley.

Forrest Dollinger, examination, Leadville.

D. R. Hatch, complimentary, Georgetown.

F. C. Spencer, complimentary, Monte Vista.

Lucy E. R. Scott, complimentary, Denver.

Mary A. Smith, complimentary, Aspen.

Edward F. Hermanns, complimentary, Denver.

Issued in 1897-1898.

Kate Arundel, examination, Denver.

Helen W. Bailey, examination, Colorado Springs.

Margaret McKay, examination, Telluride.

James Westhaver, examination, Denver.

Alston Ellis, complimentary, Fort Collins.

Wellington B. Givens, examination, Denver.

STATE LIBRARY.

Hon. Grace Espy Patton, Superintendent of Public Instruction and Ex-Officio State Librarian:

Madam—I have the honor to submit for your consideration the following report of the Colorado State Library for the years 1897-1898:

The Session Laws of 1861, providing for the establishment of a territorial library, made the territorial superintendent of public instruction ex-officio state librarian. An act of 1865 repealed the act of 1861, making the territorial treasurer ex-officio state librarian. The act of 1865 was repealed in 1877, and the superintendent of public instruction again became ex-officio state librarian.

Upon assuming the duties of assistant state librarian, January 13, 1897, I took an inventory of the library, at the same time classifying the books numerically and alphabetically.

This inventory showed 10,499 bound books on the shelves. The bound books in the state library now number 13,000. During 1897 and 1898, 2,501 bound volumes were received and 2,403 pamphlets and paper-covered books. The State library has turned over 304 bound volumes to the Supreme Court library.

The library hours from 10 a. m. to 12 m. and from 2 to 4 p. m., provided by the statutes, are too short to render the library available to the general public. Hence, the library hours were extended from 9 a. m. to 5 p. m. This arrangement works admirably, and from twenty-five to fifty persons daily take advantage of the privileges afforded by the library. Another improvement has been made by flooring over the opening between the Supreme Court library and the State library, thus securing more space.

Shelf room was found to be inadequate. To meet the demands of the library, six cases and new shelving were added.

The library has been catalogued for the first time, the Dewey system being used. A card cabinet was purchased. The following portraits have been framed and hung: Lincoln, Grant, Whittier, Elizabeth Cady Stanton, and Francis E. Willard; also, several maps, including a topographical map of Colorado, a national map of the territory from the Mississippi to the Pacific ocean, 1867, and map of the boundary line of Massachusetts and New York, showing ancient colonial and provincial grants.

Consular reports and bulletins of the agricultural and other departments from 1880-1898 have been examined and classified.

Inasmuch as a State library should be a complete reference library, much time and effort have been given in the endeavor to obtain a complete file of all Colorado reports and of all Colorado publications—historical, botanical, etc.—in fact, all literature pertaining to Colorado. The result has been very gratifying.

To assist the struggling libraries in the remote school districts, books have been sent out in the form of a traveling library. This innovation has proved helpful to many districts where the library fund is limited. Duplicate volumes have been sent to other libraries.

The pamphlet, "Libraries, Their Establishment and Management in Colorado," issued in 1897, from the office of superintendent of public instruction, has resulted in awakening more interest and a more progressive library spirit than has ever before been evinced in Colorado. Copies of this pamphlet have been sent to each library in the state; also, to each school district in the state.

The regular list of government publications, which make the state library possible, have been received. The most important of these are patent office records, congressional records, annals of congress, house and senate journals, Smithsonian reports, etc. The patent office records, giving specifications and drawings of every patent filed, are to be found in no other library in the state.

One of the most valuable accessions during the present administration is a set of books containing the messages and papers of the presidents from 1789 to 1897.

In exchange for Colorado state reports, the library will receive Mills' Colorado Digest.

The citizens of Colorado have shown their interest in the state library by donating books as follows:

"Geology of Colorado," Bancroft Book Co.

"Western Ore Deposits," Bancroft Book Co.

"Geology of Wisconsin" (4 volumes), J. Warner Mills.

"The First Battle" (W. J. Bryan), T. M. Robinson.

Map of Southwestern Colorado, E. B. Fischer.

Map of San Juan Mining Districts, 1883, E. B. Fischer.

Map of San Juan Mining Districts, 1898, E. B. Fischer.

Map of Colorado, J. F. Shafroth.

Map of the United States, J. F. Shafroth.

Drainage Map of Colorado, state engineer.

"Young Konkaput, the King of the Utes," Haskell.

"Placer Mining," Prof. Arthur Lakes.

"A Hand Book for Klondike," Prof. Arthur Lakes.

"Prospecting for Gold and Silver in North America," Prof. Arthur Lakes.

I would suggest an effort to complete, if possible, sets of federal publications and official publications of Colorado, and the genealogical records, which have proved helpful to persons desiring to unite with the revolutionary and colonial societies; also, to obtain, if possible, all missing numbers of adjutant general's reports.

I would recommend that the general assembly appropriate \$1,000 for the purchase of books, and for the general maintenance of the library.

Purchases.

"Narrative and Critical History of America" (8 volumes).

"American Biography."

Ellis' "United States History."

“Japan Described and Illustrated by the Japanese.”
 “Bulletins of the Bureau of American Republics”
 (11 volumes).

Speeches of Hon. James B. Belford.

Cram's Bankers' and Brokers' Railroad Atlas.

“History of Cuba—Her Struggles for Liberty.”

Iowa Geological Survey Report.

“Social Year Book.”

“Hinton's “United States History” (3 volumes).

Hall's History of Colorado (4 volumes).

Library Fund.

1897.

	Dr.
To appropriation, 1897.....	\$500 00
	<hr/>
	\$500 00
	Cr.
By purchases.....	\$138 30
By cataloguing.....	293 50
By shelving, typewriting, etc.....	65 25
Balance	2 95
	<hr/>
	\$500 00

1898.

	Dr.
To appropriation, 1898.....	\$500 00
	<hr/>
	\$500 00
	Cr.
By purchases.....	\$138 25
By binding.....	31 25
By cataloguing.....	175 00
By assistance, etc.....	146 05
	<hr/>

Respectfully submitted,

HATTIE E. STEVENSON,

Assistant State Librarian.

RECOMMENDATIONS TO THE LEGISLATURE.

The following recommendations are herewith submitted for the consideration of the twelfth general assembly:

First—That a fee of one dollar be charged each applicant for a teacher's certificate at the county examinations, the funds so collected to go to the District Normal Institute fund.

Second—That the superintendent of public instruction be *ex officio* a member of the boards of control of the State University, the State Agricultural College, the State School of Mines, and the Colorado School for the Deaf and Blind.

Third—That the instructors employed in the State Reformatory institutions be required to hold county teachers' certificates.

Fourth—That the law providing for third grade certificates be repealed.

Fifth—That the law providing for the State Board of Examiners and for the granting of complimentary state diplomas be amended in such manner that its interpretation shall not be a matter of doubt.

Sixth—That there be an educational qualification for county superintendents and school directors.

Seventh—That the powers of school boards be restricted.

Eighth—That membership in the State Teachers' Reading Circle be compulsory, on the part of teachers.

Ninth—That the attendance of teachers upon District Normal Institutes be compulsory.

Tenth—That some provision be made whereby uniformity may be secured in marking the papers at the county teachers' examinations.

Eleventh—Section 3, article IX., of the Constitution of the state of Colorado makes the following provision:

"The public school fund of the state shall forever remain inviolate and intact; the interest thereon only shall be expended in the maintenance of the schools of the state, and shall be distributed amongst the several counties and school districts of the state, in such manner as may be prescribed by law. No part of this fund,

principal or interest, shall ever be transferred to any other fund, or used or appropriated, except as herein provided. The state treasurer shall be the custodian of this fund, and the same shall be securely and profitably invested, as may be by law directed. The state shall supply all losses thereof that may in any manner occur."

The records of the office of the state treasurer reveal the fact that, in 1887, 1888, and 1889, state salary warrants to the amount of \$444,517.46 were issued in payment of appropriations in excess of the constitutional limit. These illegal warrants were given precedence of payment, and the treasury funds were exhausted before the warrants in which the school funds were invested were reached. The interest overdue on these warrants amounts, at the present time, to \$265,000. The warrants are yielding no return to the school fund.

I would recommend that the twelfth general assembly take immediate action toward reimbursing the school fund. By so doing, the credit of the state will be improved, the overdue interest will lighten the burdens of the taxpayers, and the schools of Colorado will be materially advanced.

Respectfully submitted,

GRACE ESPY PATTON-COWLES,
Superintendent of Public Instruction.

Statistical Reports

1897=1898.

Census.

Enrollment and Attendance.

Teachers and Salaries.

Per Capita Expenses and School Houses.

Receipts.

Disbursements.

School Bond Account.

Examination of Teachers.

Apportionment.

TABLE I.
CENSUS, 1897.

COUNTIES	BETWEEN 6 AND 21			BETWEEN 22 AND 31		
	Male	Female	Total	Male	Female	Total
Arapahoe.....	17,168	17,818	34,986	7,836	7,886	15,712
Archuleta.....	188	164	352	91	92	183
Baca.....	118	95	213	44	107	151
Bent.....	327	327	654	141	164	305
Boulder.....	2,890	2,836	5,726	1,198	1,263	2,461
Chaffee.....	794	743	1,537	382	357	739
Cheyenne.....	59	53	112	17	14	31
Clear Creek.....	1,013	1,007	2,020	481	477	958
Conejos.....	1,746	1,686	3,432	815	875	1,690
Costilla.....	836	824	1,660	387	394	781
Custer.....	595	445	950	230	199	429
Delta.....	824	754	1,578	367	346	713
Dolores.....	142	119	261	72	62	134
Douglas.....	515	443	958	227	204	431
Eagle.....	371	292	663	202	165	367
Elbert.....	514	432	946	210	216	426
El Paso.....	5,619	5,417	11,036	1,375	1,345	2,720
Fremont.....	2,072	2,005	4,077	956	931	1,897
Garfield.....	708	669	1,377	317	317	634

Gilpin.....	1,150	943	2,093	398	399	797
Grand.....	100	76	176	63	49	112
Gunnison.....	612	616	1,228	259	288	547
Hinsdale.....	150	128	278	76	61	137
Huerfano.....	1,447	1,285	2,732	736	688	1,424
Jefferson.....	1,463	1,254	2,717	615	595	1,210
Kiowa.....	101	91	192	47	40	87
Kit Carson.....	217	235	452	94	114	208
Lake.....	1,342	1,210	2,552	660	558	1,218
La Plata.....	922	918	1,840	509	532	1,041
Larimer.....	1,750	1,691	3,441	852	804	1,656
Las Animas.....	3,105	2,953	6,058	1,581	1,522	3,103
Lincoln.....	96	73	169	53	58	111
Logan.....	440	419	859	192	185	377
Mesa.....	1,231	1,148	2,379	567	548	1,115
Mineral.....	149	153	302	83	87	170
Montezuma.....	323	357	680	140	169	309
Montrose.....	731	645	1,376	344	303	647
Morgan.....	369	332	701	94	93	187
Otero.....	1,315	1,245	2,560	558	541	1,099
Ouray.....	426	439	865	219	215	434
Park.....	419	414	833	187	206	393
Phillips.....	266	233	499	98	91	189
Pitkin.....	936	928	1,864	421	425	846
Prowers.....	356	371	727	149	145	294

TABLE I.
CENSUS, 1897—Concluded.

COUNTIES	BETWEEN 6 AND 21			BETWEEN 8 AND 14		
	Male	Female	Total	Male	Female	Total
Pueblo.....	4,037	3,956	8,093	1,663	1,631	3,294
Rio Blanco.....	151	173	324	67	68	135
Rio Grande.....	701	685	1,386	321	328	649
Routt.....	427	413	840	190	220	410
Saguache.....	634	587	1,221	314	303	617
San Juan.....	133	147	280	114	108	222
San Miguel.....	363	313	676	175	135	310
Sedgewick.....	147	162	309	63	69	132
Summit.....	267	241	508	103	97	200
Washington.....	232	181	413	128	93	221
Weld.....	2,236	2,091	4,327	1,079	997	2,076
Yuma.....	288	268	556	135	131	266
Totals.....	65,441	63,603	129,044	28,705	28,310	57,015

TABLE II.
CENSUS, 1898.

COUNTIES	BETWEEN 6 AND 21			BETWEEN 8 AND 14		
	Male	Female	Total	Male	Female	Total
Arapahoe	17,889	18,317	36,206	8,097	8,195	16,292
Archuleta	217	205	422	94	109	203
Baca	125	83	208	46	45	91
Bent	322	345	667	135	160	295
Boulder	3,032	3,067	6,099	1,301	1,348	2,649
Chaffee	867	843	1,710	390	412	802
Cheyenne	64	57	121	38	34	72
Clear Creek	1,004	981	1,985	472	464	936
Conchos	1,676	1,652	3,328	823	781	1,604
Costilla	874	850	1,724	392	426	818
Custer	492	466	958	246	196	442
Delta	850	849	1,699	393	389	782
Dolores	120	92	212	62	35	97
Douglas	507	468	975	249	222	471
Eagle	344	279	623	168	161	329
Elbert	569	496	1,065	240	232	472
El Paso	6,335	6,211	12,546	3,779	2,748	6,527
Fremont	2,228	2,162	4,390	981	983	1,964

TABLE II.
CENSUS, 1898—Concluded.

COUNTIES	BETWEEN 6 AND 21			BETWEEN 8 AND 14		
	Male	Female	Total	Male	Female	Total
Garfield	775	727	1,502	350	356	706
Gilpin	1,017	1,043	2,060	404	438	842
Grand	88	83	171	46	44	90
Gunnison	618	622	1,240	269	263	532
Hinsdale	142	143	285	66	62	128
Huerfano	1,537	1,463	3,000	729	745	1,474
Jefferson	1,579	1,309	2,888	773	625	1,398
Kiowa	91	88	179	36	31	67
Kit Carson	242	255	497	121	124	245
Lake	1,223	1,125	2,348	648	585	1,233
La Plata	936	932	1,868	436	448	884
Larimer	1,781	1,709	3,490	826	836	1,662
Las Animas	3,191	2,977	6,168	1,549	1,434	2,983
Lincoln	119	95	214	52	51	103
Logan	443	416	859	197	171	368
Mesa	1,199	1,395	2,594	594	547	1,141
Mineral	145	152	297	74	82	156
Montezuma	344	398	742	150	200	350
Montrose	755	700	1,455	393	335	728

Morgan	341	300	641	118	99	217
Otero	1,382	1,370	2,752	594	621	1,215
Ouray	478	462	940	205	209	414
Park	366	394	760	165	208	373
Phillips	253	221	474	104	92	196
Pitkin	914	913	1,827	398	390	788
Provers	432	419	851	182	178	360
Pueblo	4,628	4,341	8,969	1,952	1,958	3,910
Rio Blanco	219	190	409	117	103	220
Rio Grande	693	708	1,401	265	321	586
Routt	430	468	838	----	----	383
Saguache	672	609	1,281	329	317	646
San Juan	140	152	292	72	71	143
San Miguel	370	311	681	184	134	318
Sedgwick	159	177	336	59	78	137
Summit	236	216	452	113	108	221
Washington	197	135	332	97	57	154
Weld	2,324	2,226	4,550	1,007	1,014	2,021
Yuma	286	230	516	115	97	212
Totals	68,260	66,747	135,007	31,695	30,372	62,420

TABLE III.
ENROLLMENT AND ATTENDANCE, 1897.

COUNTIES	PUPILS										
	Enrolled in High School	Enrolled in Graded Schools Below High Schools	Enrolled in Rural Schools	Under 16 Enrolled in Public Schools	Over 16 Enrolled in Public Schools	WHOLE NUMBER ENROLLED IN PUBLIC SCHOOLS			Number Between 8 and 14 Enrolled in Public Schools	Average Daily Attend- ance	Number En- rolled in Pu- blic Schools
						Male	Female	Total			
Arapahoe	1,939	23,049	1,951	24,660	2,279	12,503	14,436	26,939	15,946	19,420	1,084
Archuleta		77	141	205	13	121	97	218	130	163	
Baca			220	142	78	40	80	220	112	111	
Bent	26	234	224	427	57	239	245	484	305	377	
Boulder	334	2,980	1,777	4,363	728	2,463	2,628	5,091	2,539	3,310	59
Chaffee	97	868	436	1,238	163	708	693	1,401	797	895	
Cheyenne		66	40	90	16	54	52	106	37	64	
Clear Creek	128	1,154	268	1,396	154	708	842	1,550	830	1,036	60
Conejos	47	898	1,213	1,896	262	1,133	1,025	2,158	1,198	1,397	10
Costilla	6	117	960	910	173	614	469	1,083	700	711	
Custer		253	454	610	97	347	360	707	368	407	
Delta	53	492	690	1,087	148	661	574	1,235	718	762	
Dolores		197	11	204	4	110	98	208	126	145	
Douglas		148	692	716	124	369	471	840	480	501	
Eagle	20	72	455	471	76	295	252	547	337	318	
Elbert		134	537	565	106	362	309	671	429	438	

El Paso.....	477	7,986	1,489	8,095	1,827	4,950	4,972	9,922	5,457	6,074	150
Fremont.....	134	2,661	563	3,109	249	1,702	1,656	3,358	2,026	2,329	-----
Garfield.....	-----	-----	1,221	1,066	155	605	616	1,221	709	784	-----
Gilpin.....	60	1,059	170	1,199	90	669	620	1,289	619	971	90
Grand.....	-----	20	89	102	7	67	42	109	83	55	-----
Gunnison.....	57	388	427	770	102	404	468	872	490	614	-----
Hinsdale.....	-----	200	45	223	22	129	116	245	101	157	-----
Huerfano.....	30	604	1,002	1,443	193	801	835	1,636	948	858	-----
Jefferson.....	92	1,035	913	1,840	200	1,043	997	2,040	1,203	1,364	-----
Kiowa.....	-----	-----	196	151	45	104	92	196	98	130	-----
Kit Carson.....	-----	-----	449	359	90	213	236	449	111	353	-----
Lake.....	54	1,763	360	1,992	185	988	1,189	2,177	1,281	1,404	652
La Plata.....	86	902	494	1,316	166	743	739	1,482	837	922	-----
Larimer.....	159	1,118	1,440	2,400	317	1,394	1,323	2,717	1,456	1,836	2
Las Animas.....	163	2,332	1,754	3,850	399	2,225	2,024	4,249	2,514	2,587	-----
Lincoln.....	-----	82	125	178	29	106	101	207	116	116	-----
Logan.....	58	328	387	629	144	412	361	773	329	326	-----
Mesa.....	82	1,133	777	1,706	286	1,018	974	1,992	1,176	1,420	5
Mineral.....	-----	220	24	225	19	120	124	244	129	162	-----
Montezuma.....	-----	-----	667	566	101	310	357	667	340	339	-----
Montrose.....	27	451	519	882	115	545	452	997	701	674	-----
Morgan.....	57	235	338	515	115	310	320	630	375	384	-----
Otero.....	107	1,219	741	1,840	227	1,054	1,013	2,067	930	1,303	-----
Ouray.....	30	387	-----	371	46	197	220	417	212	364	-----
Park.....	-----	243	377	555	65	299	321	620	373	409	5

TABLE III.
ENROLLMENT AND ATTENDANCE, 1897—Concluded.

COUNTIES	PUPILS										
	Enrolled in High School	Enrolled in Graded Schools Below High Schools	Enrolled in Rural Schools	Under 16 Enrolled in Public Schools	Over 16 Enrolled in Public Schools	WHOLE NUMBER ENROLLED IN PUBLIC SCHOOLS			Number Between 8 and 14 Enrolled in Public Schools	Average Daily Attendance	Number Enrolled in Private Schools
						Male	Female	Total			
Phillips	27	88	362	405	72	251	226	477	239	326	-----
Pitkin	57	1,266	281	1,431	173	796	808	1,604	854	1,214	130
Prowers	41	225	299	481	84	277	288	565	268	323	-----
Pueblo	355	3,987	1,125	4,921	546	2,723	2,744	5,467	3,030	3,589	290
Rio Blanco	-----	101	152	210	43	115	138	253	134	149	-----
Rio Grande	-----	585	507	951	141	539	553	1,092	622	740	-----
Routt	-----	181	447	543	85	313	315	628	366	425	-----
Saguache	-----	469	313	667	115	411	371	782	400	498	-----
San Juan	6	232	-----	227	11	116	122	238	136	165	-----
San Miguel	-----	260	242	475	27	275	227	502	310	346	-----
Sedgwick	46	90	170	253	53	150	156	306	135	209	-----
Summit	-----	198	140	306	32	180	158	338	188	247	-----
Washington	-----	123	217	297	43	192	148	340	212	239	-----
Weld	154	1,583	1,716	3,139	314	1,767	1,686	3,453	2,076	2,262	-----
Yuma	-----	171	351	443	79	282	240	522	309	371	-----
Totals	5,009	64,634	30,958	89,111	11,490	49,622	50,979	100,601	56,945	67,093	2,537

TABLE IV.
ENROLLMENT AND ATTENDANCE, 1898.

COUNTIES	PUPILS								Number Enrolled in Private Schools		
	Enrolled in High School	Enrolled in Graded Schools Below High Schools	Enrolled in Rural Schools	Under 16 Enrolled in Public Schools	Over 16 Enrolled in Public Schools	WHOLE NUMBER ENROLLED IN PUBLIC SCHOOLS					
						Male	Female	Total			
Arapahoe	2,145	24,533	1,702	26,204	2,176	13,939	14,441	28,380	16,869	19,789	1,311
Archuleta	---	122	122	234	10	126	118	244	242	93	---
Baca	---	---	171	143	28	102	69	171	80	98	---
Bent	29	264	278	506	65	275	296	571	349	373	---
Boulder	282	2,969	1,761	4,509	503	2,456	2,556	5,012	2,676	3,393	57
Chaffee	70	1,005	432	1,163	344	754	753	1,507	786	951	---
Cheyenne	---	56	43	83	16	49	50	99	69	74	---
Clear Creek	138	1,100	310	1,482	66	735	813	1,548	958	1,269	39
Comstock	21	885	1,175	1,718	363	1,137	944	2,081	1,205	1,870	189
Costilla	13	129	1,017	905	254	661	498	1,159	694	761	35
Custer	---	267	488	668	87	400	355	755	449	457	---
Delta	68	458	936	1,318	144	757	705	1,462	470	911	---
Dolores	12	154	13	165	14	100	79	179	112	134	---
Douglas	25	132	685	698	144	418	424	842	471	570	---
Eagle	36	70	446	433	119	292	260	552	321	207	---
Elbert	---	113	589	621	81	361	341	702	437	473	---

TABLE IV.
ENROLLMENT AND ATTENDANCE, 1898—Concluded.

COUNTIES	PUPILS										
	Enrolled in High School	Enrolled in Graded Schools Below High Schools	Enrolled in Rural Schools	Under 16 Enrolled in Public Schools	Over 16 Enrolled in Public Schools	WHOLE NUMBER ENROLLED IN PUBLIC SCHOOLS			Number Between 8 and 14 Enrolled in Public Schools	Average Daily Attendance	Number Enrolled in Private Schools
						Male	Female	Total			
El Paso.....	487	8,065	1,881	9,595	838	5,265	5,168	10,433	6,006	6,006	166
Fremont.....	200	2,805	590	3,269	326	1,823	1,772	3,595	1,995	2,377	-----
Garfield.....	-----	-----	1,206	1,078	128	598	608	1,206	769	794	-----
Gilpin.....	59	1,164	175	1,287	111	678	720	1,398	835	1,010	60
Grand.....	8	50	48	92	14	57	49	106	90	77	4
Gunnison.....	48	442	457	857	90	450	497	947	549	600	-----
Hinsdale.....	21	183	57	244	17	126	135	261	175	187	-----
Huerfano.....	47	569	1,175	1,512	279	949	842	1,791	684	1,107	-----
Jefferson.....	97	1,178	816	1,862	229	1,083	1,008	2,091	1,084	1,453	-----
Kiowa.....	-----	-----	181	149	32	90	91	181	85	113	-----
Kit Carson.....	-----	-----	448	371	77	225	223	448	243	275	-----
Lake.....	60	1,758	409	1,954	273	1,120	1,107	2,227	1,176	1,437	600
La Plata.....	77	940	479	1,366	130	739	757	1,496	831	972	-----
Larimer.....	144	1,202	1,465	2,556	255	1,412	1,399	2,811	1,635	1,930	3
Las Animas.....	176	2,129	1,957	4,033	229	2,179	2,083	4,262	2,517	2,522	25
Lincoln.....	-----	101	79	156	24	96	84	180	112	123	2

[illegible]

TABLE V.
TEACHERS AND SALARIES, 1897.

COUNTIES	TEACHERS EMPLOYED AT ONE TIME						NUMBER OF DIFFERENT TEACHERS DURING THE YEAR				AGGREGATE AMOUNT PAID TEACHERS DURING THE YEAR	AVERAGE MONTHLY SALARY		
	GRADED SCHOOLS			RURAL SCHOOLS			GRADED SCHOOLS		RURAL SCHOOLS			Graded Schools	Rural Schools	
	Male	Female	Total	Average Monthly Salary		Total	Male	Female	Total	Male	Female			Total
				Male	Female									
Arapahoe	76	440	526	\$ 94 53	\$ 66 52	107	17	90	534	76	458	\$ 80 52	\$ 40 25	
Archuleta	1	1	2	57 50	40 00	6	1	5	2	1	1	48 75	47 50	
Baca						14	6	8					35 00	
Bent	2	7	9	75 00	42 00	12	6	6	9	2	7	7,547 72	45 16	
Boulder	17	49	66	74 18	61 06	55	11	44	76	19	57	54,001 72	43 06	
Chaffee	3	18	21	105 00	66 00	24	5	19	21	3	18	22,669 09	53 90	
Cheyenne		2	2		62 50	6		6	2		2	2,775 00	40 00	
Clear Creek	3	19	22	126 00	69 80	10	1	9	22	3	19	19,921 00	63 00	
Conejos	7	9	16	81 16	40 75	26	11	15	16	7	9	12,829 37	52 11	
Costilla	1	2	3	50 00	40 00	31	17	14	3	1	2	7,355 97	38 00	
Custer	2	3	5	72 50	50 00	18	11	7	5	2	3	5,878 39	43 05	
Delta	2	7	9	87 00	59 00	22	11	11	9	11	11	11,397 00	47 00	
Dolores	1	3	4	125 00	75 00	1		1	4	1	3	3,445 00	45 00	
Douglas	2	1	3	85 00	66 66	32	9	23	3	2	1	11,563 75	44 80	

Eagle	1	1	2	81 00	67 00	3	19	22	62 50	55 60	1	2	3	2	23	25	7,227 20	74 00	59 05
Elbert	2	2	4	68 00	45 00	10	26	36	48 00	38 00	3	2	5	10	27	37	9,186 59	56 50	43 00
El Paso	23	152	175	90 33	59 00	10	56	66	70 00	45 00	23	152	175	13	66	79	119,305 00	74 66	57 50
Fremont	19	44	63	78 08	57 80	12	19	31	50 00	47 67	19	48	67	14	24	38	48,740 00	67 94	48 83
Garfield						10	34	44	69 00	50 44				11	38	49	36,367 00		59 72
Gilpin	4	18	22	116 25	69 18		8	8		42 05	4	19	23		9	9	18,875 25	92 72	42 05
Grand		1	1		50 00		4	4		36 39		1	1		7	7	1,488 34	50 00	36 19
Gunnison	4	7	11	77 50	56 43	2	15	17	53 33	59 64	4	7	11	2	22	24	12,604 56	66 96	56 48
Hinsdale	1	3	4	85 00	58 33		2	2		45 00	1	3	4		2	2	2,977 55	71 66	45 00
Huerfano	4	8	12	76 25	66 90	9	22	31	50 62	43 25	4	9	13	9	25	34	14,120 00	71 57	46 93
Jefferson	10	17	27	67 00	50 00	8	36	44	40 00	43 00	10	17	27	13	46	59	29,151 95	58 50	41 50
Kiowa						10	11	21	44 82	40 90				10	11	21	5,601 00		42 86
Kit Carson						12	29	41	34 97	36 38				12	29	41	8,040 60		35 67
Lake	6	28	34	105 86	71 95	1	11	12	75 00	65 00	6	30	36	1	17	18	39,989 25	88 90	70 00
La Plata	6	13	19	111 00	76 00	5	14	19	49 00	45 75	6	13	19	5	20	25	21,107 00	93 50	47 37
Larimer	4	28	32	116 45	60 28	21	39	60	44 35	43 55	4	29	33	22	55	75	37,551 25	88 36	43 95
Las Animas	11	34	45	65 14	50 90	31	18	49	46 85	39 70	13	36	49	32	25	57	39,554 27	58 02	43 27
Lincoln		3	3	70 00	50 00	7	8	15	45 42	44 75	1	3	4	7	9	16	5 265 00	60 00	45 08
Logan	1	6	7	90 00	48 33	13	26	39	36 82	34 95	2	7	9	13	25	38	11,893 65	69 16	35 88
Mesa	6	20	26	66 80	66 00	7	24	31	49 40	50 00	6	20	26	7	24	31	13,938 15	66 40	49 70
Miueal	3	3	6	100 00	80 00		2	2		55 00	3	3	6		2	2	4,159 75	90 00	55 00
Montezuma						6	10	16	57 70	43 23				7	16	23	4,625 00		50 46
Montrose	1	8	9	115 00	64 37	10	8	18	52 50	50 00	1	8	9	13	9	22	11 158 75	89 68	51 25
Morgan	2	7	9	107 00	44 00	5	10	15	49 00	41 00	2	8	10	5	11	16	9,522 00	75 50	45 00
Otero	6	20	26	85 62	60 27	10	14	24	43 50	43 36	8	20	28	10	15	25	21,977 35	72 95	43 43

TABLE V.
TEACHERS AND SALARIES, 1897—Concluded.

COUNTIES	TEACHERS EMPLOYED AT ONE TIME										NUMBER OF DIFFERENT TEACHERS DURING THE YEAR						AGGREGATE AMOUNT PAID TEACHERS DURING THE YEAR	AVERAGE MONTHLY SALARY	
	GRADED SCHOOLS					RURAL SCHOOLS					GRADED SCHOOLS			RURAL SCHOOLS				Graded Schools	Rural Schools
	Male	Female	Total	Average Monthly Salary		Male	Female	Total	Male	Female	Total	Male	Female	Total					
				Male	Female														
															Male	Female			
Ouray	1	7	8	\$125 00	\$ 84 44	8	4	12	\$ 62 34	\$ 56 25	1	7	8	6	14	\$104 72	\$ 59 28		
Park	3	3	6	85 00	58 33	5	17	22	51 50	42 94	3	3	6	5	24	29	71 66	47 22	
Phillips	2	1	3	62 50	50 00	14	17	31	34 00	30 83	2	1	3	15	20	35	56 25	32 41	
Pitkin	4	21	25	127 50	70 47	4	14	18	66 56	56 35	4	24	28	4	20	24	98 98	61 45	
Prowers	2	4	6	75 00	47 50	10	12	22	38 77	40 41	2	5	7	13	14	27	61 25	39 59	
Pueblo	8	98	106	129 77	66 42	11	40	51	53 93	44 29	9	101	110	12	46	58	98 09	49 11	
Rio Blanco	1	1	2	80 00	60 00	4	4	8	53 75	49 25	1	1	2	4	4	8	70 00	51 50	
Rio Grande	4	8	12	83 75	65 00	8	15	23	42 21	44 53	4	11	15	10	18	28	74 37	43 37	
Routt	3	3	6	58 75	47 50	10	18	28	43 81	41 27	3	4	7	12	26	38	53 12	42 54	
Saguache	1	3	4	75 00	50 00	12	14	26	48 50	44 80	1	3	4	12	18	30	62 50	46 65	
San Juan	1	5	6	120 00	87 50	---	---	---	---	---	1	5	6	--	--	---	103 75	---	
San Miguel	2	5	7	100 00	80 00	2	6	8	60 00	57 00	2	5	7	2	10	12	90 00	58 50	
Sedgwick	1	2	3	75 00	50 00	5	19	24	32 40	33 75	1	2	3	5	22	27	62 50	33 08	
Summit	1	5	6	111 11	64 37	2	5	7	70 00	50 00	1	6	7	2	8	10	87 74	60 00	

Washington.....	1	3	4	65 00	42 50	8	15	23	32 35	30 75	1	3	4	8	21	29	5,761 15	53 75	31 55
Weld	11	38	49	85 50	57 50	14	53	67	50 22	46 67	11	39	50	15	54	69	52,124 28	63 11	47 44
Yuma	2	3	5	60 00	38 50	9	22	31	32 87	29 91	2	3	5	9	24	33	6,913 50	49 25	31 39
Total	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	\$1,509,214 58	---	---

TABLE VI.
TEACHERS AND SALARIES, 1898.

COUNTIES	TEACHERS EMPLOYED AT ONE TIME										NUMBER OF DIFFERENT TEACHERS DURING THE YEAR				AGGREGATE AMOUNT PAID TEACHERS DURING THE YEAR	AVERAGE MONTHLY SALARY			
	GRADED SCHOOLS					RURAL SCHOOLS					GRADED SCHOOLS		RURAL SCHOOLS			Graded Schools	Rural Schools		
	Male	Female	Total	Average Monthly Salary		Male	Female	Total	Average Monthly Salary		Male	Female	Total	Male	Female			Total	
				Male	Female				Male	Female									
Arapahoe	79	444	523	\$120 00	\$ 75 00	20	82	99	\$ 41 00	\$ 40 00	82	472	554	21	91	112	\$ 460,957 00	\$ 97 50	\$ 40 50
Archuleta	---	2	2	---	115 50	1	4	5	52 50	45 31	---	2	2	1	6	7	2,233 27	115 50	48 90
Baca	---	---	---	---	---	9	7	16	31 39	28 57	---	---	---	9	7	16	1,884 50	---	29 98
Bent	2	6	8	51 66	75 00	9	14	23	40 50	44 44	2	6	8	10	16	26	8,674 75	63 33	42 47
Boulder	10	48	58	73 18	58 62	10	44	54	47 32	40 89	11	54	65	10	63	73	56,650 95	65 90	44 10
Chaffee	5	16	21	100 00	61 00	6	17	23	52 50	48 50	5	16	21	6	17	23	19,885 98	80 50	50 50
Cheyenne	1	1	2	75 00	55 00	1	5	6	35 00	42 68	1	1	2	1	6	7	2,805 00	65 00	38 84
Clear Creek	4	20	24	117 50	65 00	2	9	11	75 00	49 00	4	22	26	2	13	15	21,357 50	91 25	62 00
Conejos	7	9	16	81 00	42 00	15	13	28	45 00	47 00	7	9	16	15	13	28	13,047 66	61 50	46 00
Costilla	1	2	3	65 00	50 00	16	11	27	41 80	38 44	1	2	3	19	14	33	7,746 50	57 50	40 12
Custer	2	3	5	72 50	50 00	8	12	20	47 02	38 86	2	3	5	11	16	27	6,048 00	61 25	42 94
Delta	2	7	9	80 00	57 50	9	15	24	48 81	46 65	2	7	9	9	15	24	11,496 38	68 75	47 73
Dolores	2	2	4	92 50	75 00	---	1	1	---	45 00	2	2	4	--	1	1	3 670 91	83 75	45 00
Douglas	2	2	4	82 50	60 00	7	26	33	49 00	43 00	2	2	4	7	31	38	10,976 93	71 25	46 00

Eagle	1	1	2	60 00	52 00	2	17	19	60 75	53 20	1	1	2	13	18	21	1,253 00	56 00	56 97
Elbert	2	2	4	62 50	47 00	11	28	39	47 00	36 00	2	2	4	11	29	40	10,350 00	54 75	41 50
El Paso	25	133	158	116 52	74 86	17	44	61	53 60	44 00	27	135	162	17	58	75	170,447 42	95 69	48 80
Fremont	16	49	65	82 40	63 80	11	21	32	51 40	42 80	17	50	67	12	22	34	50,364 00	73 10	47 10
Garfield																	18,183 50		60 87
Gilpin	4	19	23	117 03	67 87	1	9	10	55 00	42 67	4	20	24	1	16	17	19,026 00	92 45	48 83
Grand	1	3	4	50 00	37 50			5			1	3	4		5	5	1,617 86	43 75	39 20
Gunnison	3	8	11	80 00	55 83	4	24	28	55 37	45 34	3	8	11	5	43	48	14,558 25	67 91	50 35
Hinsdale	1	5	6	85 00	61 73		3	3			1	7	8		4	4	2,617 73	73 36	43 33
Huerfano	4	8	12	86 25	56 25	14	24	38	52 00	37 93	4	8	12	15	25	40	14,839 08	71 75	44 96
Jefferson	13	17	30	70 00	50 00	8	33	41	46 00	42 40	14	19	30	12	46	58	28,998 25	60 00	44 20
Kiowa																	4,683 00		44 10
Kit Carson																	8,644 16		37 63
Lake	6	31	37	102 35	70 05	2	10	12	56 00	56 00	7	32	39	3	16	19	31,286 00	86 20	56 00
La Plata	5	15	20	95 70	67 10	6	15	21	51 25	41 00	5	15	20	6	15	21	19,209 75	81 40	46 12
Larimer	7	29	36	96 00	55 00	16	38	54	48 00	40 00	7	33	40	22	51	73	38,049 85	75 50	44 00
Las Animas	8	35	43	62 00	51 00	37	18	55	41 00	31 00	9	35	44	38	21	59	20,673 76	56 50	36 00
Lincoln	4	5	9	55 83	45 00	1	5	6	40 00	42 00	7	5	12	1	5	6	3,744 68	50 41	41 00
Logan	3	4	7	66 66	45 00	15	25	40	36 63	34 40	3	4	7	17	27	44	11,656 65	55 83	35 51
Mesa	5	22	27	89 00	65 00	5	29	34	55 00	45 00	6	25	31	6	30	36	25,572 49	77 00	50 00
Mineral	2	4	6	115 00	55 00		2	2			3	4	7		2	2	4,192 50	85 00	55 00
Montezuma	2	3	5	67 00	50 00	5	15	20	48 00	44 50	3	3	6	5	15	20	5,948 44	58 50	46 25
Montrose	1	9	10	115 00	61 10	12	10	22	54 37	45 50	1	9	10	12	13	25	11,988 75	88 05	49 93
Morgan	2	7	9	100 50	48 58	6	6	12	40 62	46 87	3	8	11	8	8	16	8,858 70	74 54	43 74
Otero	9	24	33	77 85	48 58	8	12	20	45 00	42 54	9	24	33	8	12	20	27,968 25	63 21	43 77

Washington.....	2	5	7	47 50	37 50	6	12	18	32 83	30 58	2	5	7	6	13	19	4,994 50	42 50	31 70
Weld.....	15	38	53	74 44	58 85	12	56	68	49 32	46 10	15	41	56	13	59	72	58,081 60	66 64	47 71
Yuma.....	2	3	5	55 00	40 00	3	24	27	36 66	30 00	2	3	5	3	27	30	6,518 50	47 50	33 33
Total.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	\$1,468,694 91	---	---

Fremont	175	125	3 25	5 54	10	20	13	43	91	128,250 00
Garfield	-----	123	3 45	5 54	10	14	8	32	44	62,781 00
Gilpin	181	123	2 95	4 69	2	10	2	14	31	46,835 00
Grand	97	89	4 15	5 85	2	2	-----	4	8	1,350 00
Gunnison	180	117	2 02	2 87	10	12	4	26	42	43,745 00
Hinsdale	184	175	3 36	4 47	2	-----	1	3	6	28,490 00
Huerfano	167	111	1 98	4 00	10	16	4	30	52	45,270 00
Jefferson	178	142	2 98	4 92	6	24	20	50	71	96,365 00
Kiowa	-----	154	6 07	8 56	-----	18	2	20	20	13,870 00
Kit Carson	-----	119	7 77	10 70	17	16	5	38	49	22,334 00
Lake	190	177	2 63	4 56	-----	14	2	16	42	82,000 00
La Plata	180	118	1 90	3 64	3	15	5	23	35	62,865 00
Larimer	175	139	3 16	5 31	14	31	19	64	92	105,050 00
Las Animas	176	113	1 95	3 39	28	14	12	54	90	129,926 00
Lincoln	173	158	6 62	9 36	1	12	1	14	17	17,150 00
Logan	180	132	4 82	6 72	5	27	4	30	43	16 775 00
Mesa	168	120	3 16	3 88	5	27	5	37	57	78,910 00
Mineral	265	89	5 83	6 59	-----	4	-----	4	9	1,050 00
Montezuma	-----	153	1 99	3 56	6	15	1	22	25	17,540 00
Montrose	180	121	3 66	5 62	1	15	1	17	29	39,645 00
Morgan	166	170	2 82	4 18	1	13	2	16	23	25,585 00
Otero	170	131	2 34	3 69	4	14	11	29	57	75,330 00
Ouray	147	146	3 06	5 01	1	11	2	14	27	44,745 00
Park	176	142	3 81	5 39	10	15	1	26	33	18,087 00
Phillips	160	115	4 98	8 56	13	21	2	36	40	18,563 00

TABLE VIII.
PER CAPITA EXPENSES AND SCHOOL HOUSES, 1898.

COUNTIES	Number of days of school dur- ing the year in Graded Schools	Number of days of school dur- ing the year in Rural Schools	Average cost per month for each pupil by enroll- ment	Average cost per month for each pupil by average attendance	SCHOOL HOUSES					Valuation (in dollars)
					No. of Sod, Adobe or Log	No. of Frame	No. of Brick or Stone	Total	No. of School Rooms, both owned and rented	
Arapahoe	189	137	\$ 3 04	\$ 4 54	35	60	82	177	636	\$ 3 037,635 00
Archuleta	176	139	2 03	4 99	2	4	-----	6	7	5 498 00
Baca	-----	78	4 11	5 85	-----	13	3	16	17	3,338 00
Bent	180	154	2 70	4 38	2	10	1	13	21	23,750 00
Boulder	180	133	4 98	2 90	6	34	25	68	116	170,605 00
Chaffee	176	142	4 71	6 76	8	12	10	30	48	70,550 00
Cheyenne	180	136	9 24	12 70	-----	7	-----	7	9	12,689 00
Clear Creek	181	143	3 24	4 55	6	5	4	15	40	55,700 00
Conejos	164	130	1 33	3 08	11	7	8	26	43	28,596 00
Costilla	180	105	1 47	2 24	11	13	-----	24	32	17,010 00
Custer	129	90	2 48	4 08	4	14	4	22	29	14,360 00
Delta	175	124	1 33	1 94	12	8	4	24	33	26,800 00
Dolores	179	120	3 98	5 31	-----	1	1	2	5	10,000 00
Douglas	180	128	3 75	6 12	3	21	5	29	37	24,950 00
Eagle	160	133	2 92	5 30	5	13	2	20	21	15,950 00
Elbert	156	123	3 40	5 48	2	34	2	38	42	21,450 00

TABLE VIII.
PER CAPITA EXPENSES AND SCHOOL HOUSES, 1898—Concluded.

COUNTIES	Number of days of school during the year in Graded Schools	Number of days of school during the year in Rural Schools	Average cost per pupil by enrollment	Average cost per month for each attendance	SCHOOL HOUSES					Valuation (in dollars)
					No. of Sod, Adobe or Log	No. of Frame	No. of Brick or Stone	Total	No. of School Rooms, both owned and rented	
El Paso.....	166	151	\$ 3 04	\$ 5 45	11	69	12	92	292	\$ 253,684 78
Fremont.....	175	129	2 73	4 32	12	19	14	45	96	135,935 00
Garfield.....	-----	123	3 45	5 55	10	14	8	32	43	62,781 00
Gilpin.....	184	101	3 13	5 60	2	11	2	15	32	49,760 00
Grand.....	131	86	3 79	5 78	5	2	-----	7	9	2,175 00
Gunnison.....	180	123	4 73	6 94	12	11	4	27	42	42,740 00
Hinsdale.....	165	160	4 24	5 34	3	-----	1	4	8	15,425 00
Huerfano.....	117	110	1 82	3 29	13	13	3	29	47	36,874 00
Jefferson.....	177	140	3 03	4 98	7	24	20	51	74	98,497 00
Kiowa.....	-----	125	6 14	10 75	-----	17	2	19	20	13,380 00
Kit Carson.....	-----	110	9 84	12 75	21	20	4	45	50	24,250 00
Lake.....	180	161	3 39	7 32	1	12	2	15	16	81,375 00
La Plata.....	185	125	2 25	4 00	4	16	5	25	39	61,222 00
Larimer.....	179	145	2 79	4 79	16	29	19	64	92	108,750 00
Las Animas.....	185	90	1 87	3 29	24	16	14	54	70	130,455 00
Lincoln.....	150	90	6 60	7 00	1	11	1	13	20	19,120 00
Logan.....	180	135	6 43	9 21	3	30	2	35	46	28,565 00

Mesa	179	126	2 73	3 87	6	25	5	36	61	71,400 00
Mineral	153	90	6 40	8 14	1	4	-----	5	6	2,750 00
Montezuma	266	104	2 57	3 86	3	18	1	22	26	18,951 00
Montrose	180	123	3 70	4 97	1	16	2	19	30	35,490 00
Morgan	167	170	3 73	5 33	1	16	2	19	29	31,800 00
Otero	175	146	2 12	3 65	3	12	14	29	59	86,102 00
Ouray	144	137	3 36	5 50	2	12	2	16	28	44,995 00
Park	174	105	3 69	5 54	6	18	1	25	35	16,718 00
Phillips	160	101	4 79	6 35	14	19	2	35	39	14,838 00
Pitkin	168	136	4 50	5 87	9	11	4	24	46	69,845 00
Powers	180	127	4 67	9 17	-----	14	8	22	32	23,224 00
Pueblo	181	120	3 80	6 55	12	35	29	76	147	477,451 00
Rio Blanco	175	128	2 88	4 64	3	3	3	9	11	28,000 00
Rio Grande	176	135	2 62	4 61	5	15	5	25	36	31,120 00
Routt	121	84	3 29	4 43	26	3	-----	29	36	8,135 00
Saguache	160	127	3 65	5 23	15	14	3	32	38	19,760 00
San Juan	180	140	2 53	3 96	-----	1	-----	1	6	8,000 00
San Miguel	194	113	3 24	5 38	1	10	1	12	20	54,591 00
Sedgwick	180	121	8 53	12 23	8	19	2	29	33	16,938 00
Summit	170	141	4 88	6 07	2	7	-----	9	13	12,400 00
Washington	157	91	6 89	10 85	1	21	1	23	30	23,315 00
Weld	176	158	2 76	4 80	-----	69	17	86	95	173,820 00
Yuma	170	109	5 88	8 39	-----	32	-----	32	35	15,090 00
Total	-----	-----	-----	-----	-----	-----	-----	-----	-----	\$5,987,702 78

TABLE IX.
RECEIPTS, 1897.

COUNTIES	RECEIVED DURING THE YEAR ENDING JUNE 30, 1897				
	Amount on Hand July 1, 1896, held by County and District Treasurers	From General Fund by Apportionment	From Special Tax	From all other Sources, Including Library and Temporary Loans	Total Receipts
Arapahoe	\$ 58,280 62	\$ 237,853 00	\$ 521,106 05	\$ 74,760 40	\$ 892,000 07
Archuleta	1,267 39	1,525 68	861 91	-----	3,057 98
Baca	1,569 15	1,065 80	1,375 44	493 84	4,504 23
Bent	2,952 04	5,020 48	6,369 48	2,985 61	17,327 63
Boulder	5,599 31	17,774 52	58,261 65	11,364 63	93,000 11
Chaffee	7,798 82	5 427 45	21,166 58	1,342 59	35,735 44
Cheyenne	614 71	3,074 35	5,100 00	16 00	8,865 06
Clear Creek	4,261 75	4,940 70	25,090 63	2,494 28	36,787 36
Conejos	5,724 60	5,223 49	10 465 46	976 71	22,390 26
Costilla	4,997 24	3,484 16	5,641 57	2 819 40	16,942 37
Custer	1,211 92	2,215 78	5,272 77	228 29	8,928 76
Delta	3,778 58	5,777 67	10 507 14	3,390 52	23,453 91
Dolores	467 14	1,283 71	2,818 15	190 65	4,759 65
Douglas	7,864 50	8,356 17	5,921 76	9 33	22,151 76
Eagle	4,636 92	2,616 08	8,607 12	3,680 99	19,541 11
Elbert	3,316 13	8 002 92	8,232 65	-----	19,551 70
El Paso	28,968 52	37,350 50	120,164 65	77,574 31	264 057 98

Fremont	8,025 90	15,635 40	40,362 06	11,445 87	75,469 23
Garfield	5,758 13	5,181 93	20,079 87	657 30	31,677 23
Gilpin	6,549 95	7,482 78	17,501 51	1,061 94	32,596 18
Grand		1,839 36	313 36	-----	2,152 72
Gunnison	9,278 15	4,366 47	11,993 26	1,064 58	26,702 46
Hinsdale	1,446 87	3,443 91	617 06	1,286 47	6,794 31
Huerfano	7,029 34	7,312 15	10,601 14	1,693 65	26,636 28
Jefferson	9,521 17	21,234 00	14,586 62	3,357 77	48,693 56
Kiowa	2,346 88	2,251 00	4,582 85	44 84	9,225 57
Kit Carson	5,169 86	5,192 05	8,725 73	3,065 19	22,152 83
Lake	29,702 64	24,525 20	33,161 93	480 65	87,870 42
La Plata	10,042 83	11,412 50	15,240 37	6,070 05	42,765 75
Larimer	7,171 55	22,650 80	24,718 12	6,237 58	60,778 05
Las Animas	12,083 06	17,977 10	43,342 20	5,344 76	78,747 12
Lincoln	1,681 43	6,465 37	7,179 55	5 00	15,331 35
Logan	6,489 00	6,545 45	10,699 32	3,552 44	27,286 21
Mesa	5,497 81	9,479 79	27,575 06	2,149 19	44,701 85
Mineral	1,978 47	2,168 77	6,444 07	1,413 37	12,004 68
Montezuma	3,147 98	2,199 43	4,937 78	1,933 69	12,218 88
Montrose	4,542 33	3,087 04	12,150 98	2,378 90	22,159 25
Morgan	3,053 03	5,002 89	8,599 98	8,028 68	24,594 58
Otero	6,012 17	11,872 81	20,806 56	5,642 08	44,333 62
Ouray	3,664 92	3,627 02	10,881 07	148 30	18,319 26
Park	5,694 01	5,928 96	11,428 80	15 00	23,066 77
Phillips	4,134 08	2,755 75	4,484 60	1,046 66	12,421 09

TABLE IX.
RECEIPTS, 1897—Concluded.

COUNTIES	RECEIVED DURING THE YEAR ENDING JUNE 30, 1897				
	Amount on Hand July 1, 1896, held by County and District Treasurers	From General Fund by Apportionment	From Special Tax	From all other Sources Including Funds Raised for Library and Temporary Loans	Total Receipts
Pitkin.....	\$ 6,859 80	\$ 7,162 72	\$ 16,712 54	\$ 3,154 66	\$ 33,889 72
Prowers.....	4,080 51	6,065 15	7,819 58	834 70	18,799 94
Pueblo.....	28,351 64	39,440 92	84,184 77	12,898 38	164,875 71
Rio Blanco.....	4,074 04	2,487 32	1,320 41	1,540 97	9,422 74
Rio Grande.....	6,106 35	4,369 90	14,122 80	3,879 83	28,478 88
Routt.....	2,616 01	3,838 27	3,510 58	559 10	10,523 96
Saguache.....	3,323 36	4,632 42	8,158 45	1,951 51	18,065 74
San Juan.....	-----	141 07	2,654 54	4,836 29	7,631 90
San Miguel.....	3,975 69	5,728 38	7,853 15	6,404 81	23,962 03
Sedgwick.....	4,409 40	1,654 43	6,686 26	573 77	13,323 86
Summit.....	5,092 66	5,366 13	5,017 33	2,118 07	17,594 19
Washington.....	1,649 04	1,691 90	8,292 19	110 77	11,743 90
Weld.....	22,279 63	32,678 20	42,041 03	5,079 55	102,078 41
Yuma.....	3,349 25	2,895 15	4,667 43	1,460 13	12,371 96
Totals.....	\$ 399,496 28	\$ 675,782 35	\$ 1,400,984 87	\$ 295,854 07	\$ 2,775,117 77

TABLE X.
RECEIPTS, 1898.

RECEIVED DURING THE YEAR ENDING JUNE, 30, 1898					
COUNTIES	Amount on Hand July 1, 1897, held by County and District Treasurers	From General Fund by Apportionment	From Special Tax	From all other Sources, including Funds Raised for Library and Temporary Loans	Total Receipts
Arapahoe	\$ 77,652 68	\$ 279,888 00	\$ 503,795 59	\$ 455,963 74	\$ 1,317,300 01
Archuleta	803 70	1,964 16	614 49	-----	3,382 35
Baca	795 09	1,256 88	1,180 25	-----	3,232 22
Bent	3,140 78	5,478 41	5,624 66	78 19	14,322 04
Boulder	8,316 47	19,869 22	61,241 10	14,804 09	104,230 88
Chaffee	5,774 37	6,031 35	21,971 32	1,691 00	35,468 04
Cheyenne	1,406 75	1,470 89	2,293 71	-----	5,171 35
Clear Creek	7,440 44	5,635 80	27,701 99	2,553 79	43,332 02
Conejos	4,172 36	5,757 07	9,754 15	842 54	20,526 12
Costilla	4,741 34	4,734 97	6,744 20	2,233 84	18,454 35
Custer	1,688 90	2,786 08	6,005 38	250 94	10,731 30
Delta	1,592 60	6,195 32	10,818 26	3,684 68	22,290 86
Dolores	402 73	1,539 13	3,278 07	962 97	6,182 90
Douglas	5,802 62	9,742 86	6,549 67	24 80	22,119 95
Eagle	5,101 75	2,632 06	8,123 77	1,463 38	17,320 96
Elbert	4,285 59	7,019 50	4,943 45	1,189 81	17,438 35

TABLE X.
RECEIPTS, 1898—Concluded.

COUNTIES	RECEIVED DURING THE YEAR ENDING JUNE 30, 1898				
	Amount on Hand July 1, 1897, held by County and District Treasurers	From General Fund by Apportionment	From Special Tax	From all other Sources, Including Funds Raised for Library and Temporary Loans	Total Receipts
El Paso.....	\$ 29,353 55	\$ 40,975 51	\$ 183,395 81	\$ 178,636 33	\$ 432,361 20
Fremont.....	10,372 58	15,834 05	41,715 07	10,451 62	78,373 32
Garfield.....	5,758 13	5,181 93	20,079 87	657 30	31,677 23
Gulpin.....	7,436 14	8,207 33	16,155 20	1,335 53	33 134 20
Grand.....	1,436 91	1,326 44	484 32	-----	3,247 67
Gunnison.....	9,334 88	4,424 92	11,544 54	2,553 08	27,857 42
Hinsdale.....	1,880 23	2,220 01	838 11	1,969 47	6,907 82
Huerfano.....	5 009 36	8,412 96	11,273 86	6,030 65	30,816 83
Jefferson.....	12,416 27	21,853 40	22,040 35	4,485,73	60,795 75
Kiowa.....	1,318 04	1,956 48	3,372 40	-----	6,646 92
Kit Carson.....	8,242 42	4,290 60	5,929 53	3,025 88	21,488 43
Lake.....	26,481 61	16,258 94	35,018 03	3,883 90	81,642 48
La Plata.....	8,054 03	11,040 00	15,492 95	15,859 96	50,446 94
Larimer.....	7,830 67	23,905 00	26,957 47	148 10	58 841 24
Las Animas.....	12,443 70	17,009 63	42,870 51	2,385 13	74,708 97
Lincoln.....	3,591 65	2,757 26	2,046 29	-----	8,395 20
Logan.....	7,210 35	6,187 00	9,548 99	1,742 52	24,688 86

Mesa	5,698 83	10,929 70	33,876 12	2,032 62	52,537 27
Mineral	1,027 48	1,298 20	4,512 36	5,086 77	11,924 81
Montezuma	2,629 91	2,960 87	6,106 67	2,450 76	14,148 21
Montrose	4,908 06	3,616 15	14,215 28	2,193 45	24,932 94
Morgan	2,526 86	5,156 17	9,029 58	1,169 82	17,882 43
Otero	6,074 55	16,879 07	23,687 76	9,535 67	56,177 05
Ouray	3,013 03	4,953 21	13,479 20	1,491 34	22,936 78
Park	7,074 77	6,561 08	8,826 02	-----	22,461 87
Phillips	3,437 04	2,872 53	4,881 15	997 21	12,187 93
Pitkin	2,830 45	9,165 19	21,620 44	133 33	33,749 41
Prowers	3,346 27	6,869 24	7,065 71	2,478 24	19,759 46
Pueblo	35,545 21	41,604 63	90,451 13	7,466 54	175,067 51
Rio Blanco	1,673 16	3,041 92	1,786 44	202 88	6,704 40
Rio Grande	8,137 04	4,421 17	17,073 08	6,529 18	36,160 47
Routt	2,211 62	5,673 59	4,840 35	18 89	12,744 45
Saguache	2,169 80	4,892 53	9,651 47	84 19	16,797 99
San Juan	272 76	212 45	2,674 48	4,982 36	8,142 05
San Miguel	3,678 76	7,132 20	8,822 27	8,592 12	28,225 35
Sedgewick	3,931 58	2,180 05	7,824 84	933 43	14,869 90
Summit	1,923 03	3,092 90	5,748 89	3,493 39	14,258 21
Washington	1,870 14	1,429 57	8,679 56	113 31	12,092 58
Weld	18,192 62	29,894 70	41,799 87	4,657 37	94,544 56
Yuma	2,034 35	4,582 48	11,635 44	81 25	18,335 52
Totals	\$ 415,586 01	\$ 733,262 76	\$ 1,487,691 47	\$ 783,633 09	\$ 3,420,173 33

TABLE XIII.
SCHOOL BOND ACCOUNT, 1897.

COUNTIES	SCHOOL BOND ACCOUNT		Assessed Valuation of Property in the District
	Amount School Bonds Issued This Year	Amount School Bonds Outstanding	
Arapahoe		\$ 636,800 00	\$ 81,937,800 00
Archuleta		3,000 00	428,730 00
Baca		1,750 00	177,691 00
Bent		15,180 00	942,617 00
Boulder	\$ 2,300 00	64,600 00	5,213,655 00
Chaffee		31,050 00	2,328,324 00
Cheyenne			889 166 00
Clear Creek			1,972,202 00
Conejos		17,370 00	1,652,809 00
Costilla	1,000 00	1,395 60	1,054,595 00
Custer		7,153 00	644,230 00
Delta		16,050 00	1,003,396 00
Dolores		10,000 00	635,561 10
Douglas			1,811,608 00
Eagle		8,600 00	1,109,277 00
Elbert		5,000 00	1,951,633 00
El Paso	50,729 20	297,875 00	13,550,972 00
Fremont	820 00	55,120 00	3,694,671 00
Garfield		42,879 00	2,223,035 00
Gilpin			1,784,274 00
Grand			272,753 00
Gunnison		34,000 00	1,982,839 00
Hinsdale		11,500 00	437,623 00
Huerfano	4,300 00	11,900 00	1,778,989 00
Jefferson		49,000 00	4,060 463 00
Kiowa			1,072,089 00
Kit Carson		10,700 00	1,973,290 00
Lake			4,192,952 00
La Plata	1,200 00	39,200 00	2,289,635 00
Larimer	27,000 00	30,480 00	3,938,499 00
Las Animas		110,700 00	5,620,751 00
Lincoln			947,195 00
Logan		8,500 00	1,614,507 00

TABLE XI.
DISBURSEMENTS, 1897.

PAID DURING THE YEAR ENDING JUNE 30, 1897

COUNTIES	For Teachers' Salaries	For Fuel, Rent, Insurance and all Current Expenses	For Sites, Buildings, Furniture, Permanent Improvements	For Library Purposes	Redemption of Bonds	For Interest on Bonds	For Temporary Loans and Interest Thereon	For Interest on Registered Warrants	For Abatements and County Treasurers' Collection Fees	Total Paid Out During Year	Balance in Hands of County (and District) Treasurer to the Credit of District, June 30, 1897	Amount District Warrants Registered and Unpaid June 30, 1897	Warrants Not Registered and Other Forms of Indebtedness
Arapahoe	\$ 470,212 51	\$ 163,468 76	\$ 69,247 91	\$ 21,548 57	\$ 2,000 00	\$ 36,017 82	\$ 45,587 13	\$ 1,280 00	\$ 4,328 93	\$ 814,201 63	\$ 77,708 44	\$ 37,266 41	\$ 39,597 68
Archuleta	2,035 83	605 14	102 50	-----	-----	120 00	-----	14 08	-----	2,877 55	780 43	713 86	-----
Bacon	1,850 69	276 08	77 63	198 29	-----	-----	-----	-----	-----	2,402 69	2,101 55	4,907 16	-----
Bent	7,457 72	2,668 13	557 32	147 38	500 00	1,174 31	866 14	92 66	-----	13,474 16	3,855 47	-----	-----
Boulder	44,727 46	9,924 42	18,916 88	101 33	3 100 00	4,234 91	8 08	2,989 69	659 12	84,661 89	8,338 23	40,688 44	141 16
Chaffee	22,250 84	4,585 87	935 91	-----	550 00	1,600 18	210 59	-----	55 00	30,148 39	5,547 25	418 25	-----
Cheyenne	3,575 75	3,585 22	77 00	-----	-----	-----	-----	205 74	25 60	7,469 31	1,395 75	-----	-----
Clear Creek	19,921 10	5,316 70	781 07	112 50	1,000 00	807 70	6 57	40 86	335 47	28,322 87	8,434 59	-----	-----
Conejos	11,604 03	2,742 47	1,184 22	10 44	-----	528 61	682 00	789 58	391 96	17,934 31	4,455 95	13,397 40	375 21
Cosquilla	7,519 04	1,341 08	1,993 71	70 85	200 00	969 60	-----	102 76	93 33	12,290 37	4,652 00	1,693 00	87 68
Custer	5,878 39	700 79	219 76	63 25	-----	-----	2 69	335 56	58 40	7,258 84	1,669 92	7,518 15	274 00
Delta	10,300 30	2,568 26	2,827 43	18 50	1,500 00	1,277 15	-----	673 47	243 30	19,364 41	4,089 43	7,454 42	-----
Dolores	3,445 00	740 39	79 75	59 90	-----	-----	-----	31 88	-----	4,356 92	407 73	-----	1,283 71
Douglas	11,120 65	1,495 72	3,508 02	163 90	-----	-----	-----	76 64	101 89	16,456 82	5,694 94	3,415 15	90 50
Eagle	7,744 45	1,680 52	975 30	-----	1,100 00	1,069 65	-----	21 25	123 95	12,715 12	6,825 99	-----	-----
Elbert	10,415 23	2,766 46	-----	-----	1,000 00	553 10	86 85	-----	-----	14,821 64	4,730 06	-----	-----
El Paso	118,487 87	46,705 45	42,057 59	1,734 26	4,000 00	10,502 36	4,952 27	4,831 52	931 55	234,573 17	29,481 81	116,218 30	83 31
Fremont	31,431 41	7,739 14	12,912 73	34 94	4,700 64	4,264 55	1,039 60	2,157 65	487 04	64,776 70	10,692 53	45,585 65	66 35
Garfield	18,461 26	5,738 45	2,459 41	76 61	-----	-----	-----	393 64	210 88	27,340 25	4,336 68	5,284 70	480 05
Gilpin	19,029 00	4,450 95	702 76	112 43	-----	-----	1,000 00	24 81	49 52	25,378 47	7,217 71	291 27	1,339 58
Grand	1,438 34	43 90	-----	-----	-----	-----	-----	-----	-----	1,532 24	620 48	-----	-----
Gunnison	12,604 56	2,758 67	949 10	181 01	1,800 00	-----	-----	106 14	222 93	18,622 41	8,080 05	1,200 00	7 50
Hinsdale	2,977 50	747 64	649 46	-----	-----	800 00	-----	-----	19 77	5,194 37	1,599 94	-----	-----
Huerfano	13,521 12	2,991 15	2,549 38	-----	762 50	-----	799 70	125 35	12 74	20,671 94	5,964 34	5,615 95	-----
Jefferson	27,461 95	5,472 47	6,221 76	97 51	-----	-----	953 48	253 05	240 98	40,701 20	7,992 36	5,328 96	804 91
Kiowa	5,794 35	1,737 54	178 27	-----	-----	-----	-----	173 27	-----	7,883 73	1,341 84	1,872 01	45 00
Kit Carson	9,168 62	1,301 10	1,302 96	90	1,001 55	901 00	1 41	157 02	-----	13,834 56	8,318 27	2,668 11	105 00
Lake	30,989 25	13,140 42	4,448 46	153 59	-----	-----	199 07	-----	379 39	49,310 18	38,560 44	1,362 00	-----
La Plata	20,071 50	2,341 58	890 63	-----	4,500 00	3,257 41	308 87	855 32	-----	32,225 31	10,540 43	16,135 00	150 00
Larimer	34,520 03	6,570 13	9,515 60	295 28	-----	-----	662 48	1,347 71	36 78	52,948 01	7,830 04	18,938 10	3,228 10
Las Animas	41,637 50	7,938 17	4,501 83	36 00	1,950 00	8,710 29	573 48	575 54	254 14	66,176 95	12,570 17	12,373 20	403 00
Lincoln	5,844 09	5,264 89	60 16	-----	-----	-----	-----	371 21	199 35	11,739 70	3,591 65	-----	-----
Logan	11,970 57	3,667 50	1,002 08	25 25	2,221 25	-----	232 53	109 55	483 19	19,711 92	7,574 29	1,484 69	154 40
Mesa	27,043 00	7,772 56	3,071 18	83 40	-----	-----	-----	141 60	823 39	39,928 09	4,772 86	15,999 61	-----
Mineral	7,217 41	1,504 88	-----	-----	-----	905 00	-----	641 70	89 39	10,449 38	1,556 30	8,959 77	3,507 63
Montezuma	5,200 55	621 27	595 60	-----	1,500 00	1,109 43	-----	211 84	12 42	9,341 11	2,877 77	4,792 00	-----
Montrose	10,912 29	2,241 67	798 62	3 56	851 32	1,430 84	-----	485 97	469 95	17,194 22	4,965 03	6,673 00	-----
Morgan	8,840 67	1,331 77	9 195 96	-----	1,661 75	170 00	285 33	390 25	-----	21,875 73	2,718 85	7,772 31	90 00
Otero	21,077 35	4,741 42	3,595 94	228 15	2,300 00	3,146 20	-----	669 04	200 59	36,858 69	7,474 93	9,516 51	-----
Ouray	10,918 00	2,995 85	767 61	-----	-----	-----	26 57	458 38	127 07	15,204 03	3,025 23	2,987 00	68 55
Park	11,588 50	2,348 81	1,917 19	108 25	-----	-----	-----	42 88	-----	16,005 63	7,061 14	1,023 32	-----
Phillips	6,203 15	1,510 20	761 99	-----	-----	451 09	-----	299 43	5 00	9,230 86	3,190 23	3,951 30	-----
Pueblo	19,860 33	8,156 67	2,368 85	129 00	-----	-----	374 29	180 29	226 02	31,304 51	2,585 21	9,045 00	32 57
Prowers	7,582 61	1,601 80	2,347 62	32 71	2,500 00	1,000 16	-----	269 49	129 47	15,463 86	3,336 08	7,052 57	-----
Pueblo	83,107 23	33,735 77	5,246 24	261 02	-----	-----	1,126 00	3,720 34	2,125 47	129,322 07	35,553 64	87,835 78	1,310 08
Rio Blanco	1,875 66	436 95	797 69	-----	-----	760 00	40 50	13 05	58 72	5,982 67	3,440 07	666 18	-----
Rio Grande	12,086 87	3,156 93	1,985 13	-----	500 00	4,207 60	303 40	609 90	773 71	21,523 53	6,955 35	8,544 10	1,000 02
Routt	6,072 15	1,057 97	452 52	-----	-----	444 09	42 05	61 58	5 24	8,135 60	2,388 30	2,266 89	265 40
Saguache	9,304 61	2,039 10	1,531 51	-----	1,003 00	1,281 64	-----	42 80	104 21	15,306 87	2,758 87	3,561 06	-----
San Juan	4,800 37	2,196 69	296 35	-----	-----	-----	-----	-----	65 73	7,389 14	272 76	-----	-----
San Miguel	8,437 50	3,605 97	6,147 70	118 00	-----	1,680 00	169 57	124 53	-----	20,283 27	3,678 76	7,438 65	1,871 50
Sedgwick	6,059 23	1,437 45	787 68	-----	500 00	137 00	-----	230 30	107 31	9,258 97	4,064 99	3,796 92	15 30
Summit	6,491 00	4,895 87	791 92	64 30	502 77	618 39	250 00	-----	63 29	13,677 54	3,916 65	-----	-----
Washington	5,272 44	1,312 82	90 40	-----	1,158 74	1,109 24	73 93	199 74	104 16	9,321 47	2,422 43	3,590 65	65 00
Weld	49,633 86	11,299 41	8,902 37	135 10	6,271 80	1,609 57	4,395 49	716 64	386 81	83,351 05	18,727 36	12,410 77	5,022 01
Yuma	6,313 94	1,519 82	646 39	-----	1,050 00	550 98	-----	97 98	69 50	10,248 61	2,123 35	3,031 55	98 35
Totals	\$ 1,385,205 63	\$ 424,606 11	\$ 244,953 05	\$ 20,396 18	\$ 51,691 32	\$ 95,489 87	\$ 65,402 26	\$ 24,375 47	\$ 16,014 04	\$ 2,338,224 83	\$ 436,895 04	\$ 562,745 22	\$ 62,003 65

TABLE XII.
DISBURSEMENTS, 1898

COUNTIES	PAID DURING THE YEAR ENDING JUNE 30, 1898												Balance in Hands of County (and District) Treasurer to the Credit of District, June 30, 1898	Amount District Warrants Registered and Unpaid June 30, 1898	Warrants Not Registered and Other Forms of Indebtedness
	For Teachers' Salaries	For Fuel, Rent, Insurance and all Current Expenses	For Sites, Buildings, Furniture, Permanent Improvements	For Library Purposes	Redemption of Bonds	For Interest on Bonds	For Temporary Loans and Interest Thereon	For Interest on Registered Warrants	For Abatement and County Treasurers' Collection Fees	Total Paid Out During Year					
Arapahoe	\$ 458,570 50	\$ 159,720 56	\$ 64,457 81	\$ 20,691 62	\$ 440,100 00	\$ 60,959 02	\$ 33,889 43	\$ 2,178 81	\$ 6,380 16	\$1,247,117 91	\$ 70,182 10	\$ 63,072 48	\$ 1,511 82		
Archuleta	2,003 25	520 88	58 30							2,582 43	799 89	1,631 28			
Baca	1,822 26	504 24						6 40	5 55	2,338 45	893 77	4,868 79			
Bent	7,420 75	2,338 31	375 51	8 95			932 24	24 90	17 08	11,117 74	3,204 30	1,254 36	155 75		
Boulder	57,530 30	10,874 03	13,793 41		5,848 00	4,102 57	27 91	2,909 19	740 87	95,916 28	8,314 60	35,116 21	160 65		
Chaffee	22,193 01	3,163 40	820 94			678 00	24 93	68 77	222 50	27,171 55	8,296 49	10,780 00			
Cheyenne	2,175 00	2,330 50	158 41					68 32		4,732 23	439 12	2,887 35			
Clear Creek	21,524 40	5,212 32	2,293 64	491 91	1,000 00	958 20	15 81	31 57	386 43	31,914 28	11,417 74	680 00	182 70		
Conejos	11,374 81	1,925 59	680 18	40 00		749 97	457 89	673 48	385 33	16,249 25	4,236 87	12,609 47	101 15		
Costilla	7,746 50	1,594 47	1,017 62	15 00	400 00	992 13		128 31	111 20	12,005 23	6,419 12	1,281 39	323 65		
Custer	7,148 16	903 77	65 42			210 80	123 97	515 07	142 21	9,119 40	1,621 90	6,177 58	60 00		
Delta	11,767 53	3,262 12	763 86	373 78	1,126 03		2,558 65	601 60	106 31	20,559 88	1,730 48	7,377 16			
Dolores	3,670 91	1,067 29				800 00		121 03		5,659 23	523 67	517 25			
Douglas	10,976 93	2,240 98	3,508 03	14 05				106 16	133 24	16,979 39	5,140 56	3,754 19			
Eagle	8,423 03	2,074 61	1,261 57	26 50	101 89	327 07	58 89	239 06	679 96	13,192 58	4,128 38	860 85			
Elbert	9,676 68	2,263 57	1,480 73		246 44	430 35				14,098 07	3,340 28				
El Paso	163,676 65	49,903 82	52,659 40	2,007 57	90 080 08	18,938 18	1,148 31	8,647 80	3,014 46	399,076 27	33,284 93	66,147 97	701 26		
Fremont	47,411 71	6,238 88	2,293 16	131 03	300 00	4,356 40	1000 00	2 205 47	798 39	64,335 94	13,937 35	58,937 70	263 28		
Garfield	18,462 28	5,738 45	2,459 41	75 09				393 64	210 88	27,340 25	4,336 48	5,284 19	480 05		
Gilpin	18,916 08	3,802 93	3,076 76	223 15			220 51	58 95	278 54	26,606 92	6,527 28	341 00	198 13		
Grand	1,617 86	24 70	554 35							2,196 91	1,050 76	623 56			
Gunnison	13,454 70	2,784 95	993 04	55 64	1,300 00	1,991 44		64 59	137 14	20,691 50	7,175 92	3,029 56			
Hinsdale	2,617 73	714 24			500 00	1,367 81			27 71	5,227 49	1,080 33	2,218 20			
Huerfano	13,971 69	4,548 11	5,109 02	480 00		341 00	304 32	42 86	215 96	25,012 96	5,803 87	2,001 55			
Jefferson	27,598 15	4,816 03	4,749 62		7,898 61	3,754 78	297 84	378 05	205 76	49,698 84	11,096 91	5,977 55			
Kiowa	3 994 50	735 37	332 51					124 34		5,096 72	1,550 20	3,514 89	46 50		
Kit Carson	8,644 16	2,313 19	296 83	12 97	2,043 33	917 00	817 53	127 86		15 172 89	6,205 24	1,976 86	252 01		
Lake	31 286 00	9,517 94	4,284 04	760 87				35 43	428 78	46,313 66	35,329 42				
La Plata	31,347 26	3,794 80	973 40	12 40	6,401 25	3,572 32	119 12	1,171 72		47 392 33	3,054 61	2,724 70	8,841 48		
Larimer	36,733 85	8,766 07	2,750 51	148 79			197 28	1,664 19	6 04	50,266 73	8,574 51	9,976 44	2,225 85		
Las Animas	39,755 67	7,819 33	3,953 31		3,600 00	5,574 19	26 26	369 99	503 91	61,632 66	13,076 31	10,547 33	1,550 00		
Lincoln	3,744 68	2,378 67	270 45					11 12		6,410 92	1,984 28	1,935 49			
Logan	10,863 20	2,717 24	1,591 77	4 49	1,000 00	159 49	562 15	98 24	21 07	17,017 65	7,671 21	1,668 21	171 28		
Mesa	25,572 49	8,346 43	4,495 47	294 56			431 55	653 76		39,797 26	12,740 01	15,807 14			
Mineral	4,192 50	3,126 12						9 33	83 60	7,411 55	4 513 00	5 563 80	4,130 39		
Montezuma	6,456 73	1,690 55	517 27	10 00	500 50	811 76	124 25	431 24	33 90	9,976 20	4,172 01	4,341 88			
Montrose	11,718 84	5,946 90	379 07		103 33	1,611 27				19,759 41	5,173 53	6,838 47			
Morgan	8,858 70	3,535 82	1,208 69	144 00	495 00	279 90				14,522 11	3,360 32	5,164 89			
Otero	27,475 68	5,461 98	3,677 73	401 76	2,600 00	3,148 55	297 36	753 97	241 77	44,058 80	12,118 25	9,989 02	319 19		
Ouray	11,913 40	3,817 97	1,016 45				3 40	276 22	134 64	17,162 08	5,774 70	3,368 85	331 50		
Park	10,818 75	2,418 88	1,670 79					34 77		14,943 19	7,518 68	1,188 68			
Phillips	6,159 00	1,649 28	263 52			347 27		267 29	3 64	18,600 00	3,452 93	2,816 48	93 75		
Pitkin	21,213 51	6,359 77	1,425 60					510 01	1,490 95	30,999 84	2,604 41	4,282 77	305 00		
Prowers	8 337 38	2,634 10	2,135 25	20 35	1,200 00	724 08		167 82	535 20	16,257 18	3,502 28	7,616 50	30 00		
Pueblo	82,798 38	32,580 68	13,139 04	28 30			123 43	17,162 32	2,115 34	147,948 39	27,119 12	83,171 47	4,553 45		
Rio Blanco	4 226 88	581 76	814 09	96 02				45 86	18 33	5,782 94	921 64				
Rio Grande	17,624 22	2,798 35	1,313 91	51 50	2,103 68	1,796 94	643 27	712 47	1,299 88	27,744 22	8,420 25	7,257 94	41 98		
Routt	7,080 47	941 96	272 82	1 00		344 00	61 45	1 95		8,703 65	4,040 80	1,320 35	176 20		
Saguache	10,565 87	1,962 26	1,277 50				2 71	267 16	95 22	14,170 72	2,627 27	3,611 67	95 00		
San Juan	4,090 00	972 59	206 16							5,268 75	2,873 30		59 75		
San Miguel	9,942 75	3 352 04	5,954 97	283 42		1,680 00	1,371 58	572 14		23,156 90	5,068 45	2,041 58	202 50		
Sedgwick	5,756 15	1,286 28	969 51		500 00	496 20	52 39	327 53	200 66	9,648 72	5,221 18	5,956 04			
Summit	6,105 00	1,557 57	127 07	72 20	2,064 98	442 18		46 29	85 93	10,501 22	3,756 99				
Washington	5,219 32	1,429 70	354 11		1,831 57	1,408 31		188 12	93 49	10,524 62	1,513 66	3,181 19	53 69		
Weld	52,786 10	11,507 32	4,796 34	155 83	1,051 20	743 12	3,910 77	855 69	807 73	76,724 10	17,820 46	13,522 41	5,156 11		
Yuma	8,282 52	1,415 13	1,105 52		1,674 00	380 49		191 00	140 71	13,189 37	5,144 15	502 15			
Totals	\$ 1,473,276 39	\$ 421,585 10	\$ 224,123 85	\$ 27,134 25	\$ 585,099 99	\$ 125,484 79	\$ 49,395 20	\$ 47,043 86	\$ 22,663 47	\$ 2,978,207 10	\$ 441,602 28	\$ 497,217 40	\$ 30,883 07		



TABLE XIII.

SCHOOL BOND ACCOUNT, 1897—Concluded.

COUNTIES	SCHOOL BOND ACCOUNT		Assessed Valuation of Property in the District
	Amount School Bonds Issued This Year	Amount School Bonds Outstanding	
Mesa	\$ 1,200 00	\$ 50,210 00	\$ 2,048,022 00
Mineral		18,000 00	707,892 00
Montezuma		12,000 00	736,879 00
Montrose		18,650 00	1,288 457 00
Morgan	8,000 00	1,500 00	1,240,379 66
Otero		45,000 00	2,256,505 00
Ouray		35,900 00	1,070,971 00
Park			1,718,055 00
Phillips		7,700 00	634,031 00
Pitkin		40,000 00	2,434,875 00
Prowers	500 00	13,100 00	1,681,971 00
Pueblo		373,995 00	14,479,971 00
Rio Blanco		10,000 00	7,931,518 00
Rio Grande	4,000 00	23,050 00	1,776,010 00
Routt		4,300 00	1,136,446 00
Saguache			1,959,831 00
San Juan		10,000 00	1,338,427 00
San Miguel		27,500 00	1,296,813 00
Sedgwick		6,000 00	816,607 00
Summit		4,900 00	1,002,664 00
Washington		14,600 00	783,819 00
Weld		28,830 00	6,738,369 00
Yuma		5,300 00	910,370 00
Totals	\$ 101,049 20	\$ 2,280,247 60	\$ 210,276,713 76

TABLE XIV.
SCHOOL BOND ACCOUNT, 1898.

COUNTIES	SCHOOL BOND ACCOUNT		Assessed Valuation of Property in the District
	Amount School Bonds Issued This Year	Amount School Bonds Outstanding	
Arapahoe	\$ 408,000 00	\$ 604,700 00	\$ 78,179 450 00
Archuleta		2,000 00	434,612 00
Baca		4,250 00	195,269 00
Bent		13,500 00	876,476 00
Boulder	2,800 00	61,300 00	4,980,514 00
Chaffee	24,000 00	32,000 00	2,214,924 00
Cheyenne			831,216 00
Clear Creek	2,000 00	14,720 00	2,081,225 00
Conejos		17,370 00	1,335,790 00
Costilla		11,230 00	11,186 88
Custer		7,350 00	658,015 00
Delta		11,200 00	1,005,534 00
Dolores		10,000 00	543,495 00
Douglas			1,819,457 00
Eagle		10,900 00	1,077,628 00
Elbert		5,500 00	1,840,279 00
El Paso	53,646 70	349,238 00	14,387,690 00
Fremont	5,500 00	58,120 00	3,880,849 00
Garfield		42,879 00	2,223,035 00
Gilpin	800 00	800 00	1,889,194 00
Grand			253,807 00
Gunnison		32,100 00	1,725,459 00
Hinsdale		11,000 00	368,500 00
Huerfano	41,522 00		1,778,989 00
Jefferson		43 100 00	4,060,463 00
Kiowa			10,550 62
Kit Carson		8,656 00	898,776 00
Lake			3,829,813 00
La Plata		31,600 00	2,334,876 00
Larimer	11,600 00	37,960 00	4,143,864 00
Las Animas		105,000 00	5,212,695 00
Lincoln			1,292,490 00
Logan		9,000 00	1,450,238 00

TABLE XIV.
SCHOOL BOND ACCOUNT, 1898—Concluded.

COUNTIES	SCHOOL BOND ACCOUNT		Assessed Valuation of Property in the District
	Amount School Bonds Issued This Year	Amount School Bonds Outstanding	
Mesa	-----	\$ 41,160 00	\$ 2,906,814 00
Mineral	-----	18,000 00	707,992 00
Montezuma	-----	12,175 00	743,957 00
Montrose	\$ 1,000 00	18,650 00	1,250,448 00
Morgan	-----	8,500 00	1,076,402 00
Otero	6 500 00	48,100 00	2,421,475 00
Ouray	-----	33,600 00	1,085,085 00
Park	-----	-----	1,680,270 00
Phillips	-----	7,700 00	625,853 00
Pitkin	-----	37,000 00	2,533,645 00
Prowers	-----	12,010 00	1,322,708 00
Pueblo	278,000 00	365,555 00	12,220,209 00
Rio Blanco	-----	8,000 00	705,145 00
Rio Grande	-----	20,500 00	1,598,545 00
Routt	2,700 00	4,500 00	1,136,446 00
Saguache	-----	-----	1,930,062 00
San Juan	-----	10,000 00	1,381,653 00
San Miguel	2,000 00	29,500 00	1,260,231 00
Sedgwick	-----	5,500 00	689,444 00
Summit	-----	4,400 00	978,533 00
Washington	-----	12,500 00	721,198 00
Weld	-----	27,800 00	6,557,907 00
Yuma	-----	3,650 00	869,109 00
Totals	\$ 840,068 70	\$ 2,264,273 00	\$ 184,229,490 50

TABLE XV.
EXAMINATION OF TEACHERS, 1897.

COUNTIES	FIRST GRADE			SECOND GRADE			THIRD GRADE		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Arapahoe	4	23	27	21	101	121	14	112	126
Archuleta	3	5	8	1	1	2	1	2	3
Baca	11	13	24	6	2	8	5	4	9
Beut		6	6	1	6	7	1		1
Boulder	9	8	17	4	45	49		17	17
Chaffee	2	8	10	4	19	23	5	17	22
Cheyenne		2	2					4	4
Clear Creek	9	2	11	5	2	7	7		7
Conejos	5	4	9	8	11	19	6	6	12
Costilla	2	3	5	2	10	12	4	6	10
Custer	6	3	9	4	5	9	1	6	7
Delta	3	3	6	3	4	7	6	6	12
Dolores		1	1	1	1	2			
Douglas		4	4	4	10	14	6	14	20
Eagle		3	3	1	7	8		8	8
Elbert	4	1	5	1	13	14	4	4	8
El Paso	2	14	16	16	53	69	3	21	24
Fremont	3	4	7	10	9	19	3	15	18
Garfield	5	11	16	1	16	17			
Gilpin	2	3	5		7	7		12	12
Grand		2	2	1	2	3		3	3
Gunnison	2	10	12	2	14	16		8	8
Hiusdale		3	3		1	1		1	1
Huerfano	5	7	12	3	8	11	2	4	6
Jefferson	3	5	8	6	17	23	4	22	26
Kiowa	1		1	5	2	7	3	8	11
Kit Carson	3	3	6	6	8	14	3	13	16
Lake	4	10	14	2	7	9		11	11
La Plata		1	1	3	11	14		6	6
Larimer	3	11	14	8	30	38	5	25	30
Las Animas	5	5	10	9	10	19	17	19	36
Lincoln	1	1	2	3	6	9	1	2	3
Logan	1	5	6	4	10	14	1	12	13

TABLE XV.

EXAMINATION OF TEACHERS, 1897—Concluded.

COUNTIES	FIRST GRADE			SECOND GRADE			THIRD GRADE		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mesa	3	14	17	10	18	28	2	4	6
Mineral					1	1			
Montezuma	1	2	3	3		3		6	6
Montrose		3	3		2	2	1	4	5
Morgan	3	4	7	3	8	11	5	7	12
Otero	6	4	10	7	13	20	3	8	11
Ouray	3	7	10		1	1			
Park	3	3	6		14	14		7	7
Phillips	3		3	6	8	14	4	5	9
Pitkin					12	12	2	9	11
Prowers	2		2	5	11	16	1	5	6
Pueblo	3	2	5	5	12	17		23	23
Rio Blanco	5	1	6	2	2	4	1	3	4
Rio Grande	5	5	10	7	12	19	1	9	10
Routt	2		2	2	8	10	3	3	6
Saguache	3	7	10		7	7	2	5	7
San Juan	2	5	7						
San Miguel	1	3	4	2	6	8		3	3
Sedgwick	2	1	3		8	8	1	13	14
Summit	1	2	3	1	6	7		5	5
Washington	1	1	2	1	4	5	3	10	13
Weld	7	14	21	18	23	41	3	14	17
Yuma				4	14	18	4	7	11

TABLE XVI.
EXAMINATION OF TEACHERS, 1898.

COUNTIES	FIRST GRADE			SECOND GRADE			THIRD GRADE		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Arapahoe	7	13	20	16	114	130	13	96	109
Archuleta	1	2	3	-----	5	5	-----	1	1
Baca	2	-----	2	2	5	7	-----	3	3
Bent	-----	2	2	-----	5	5	2	1	3
Boulder	1	8	9	4	49	53	4	23	27
Chaffee	1	6	7	3	13	16	-----	17	17
Cheyenne	-----	1	1	0	1	1	1	4	5
Clear Creek	1	7	8	-----	7	7	-----	3	3
Conejos	3	3	6	4	3	7	9	2	11
Costilla	3	1	4	4	7	11	5	3	8
Custer	7	1	8	5	2	7	-----	6	6
Delta	2	1	3	1	6	7	4	6	10
Dolores	-----	2	2	1	2	3	-----	-----	-----
Douglas	4	3	7	4	18	22	3	10	13
Eagle	1	2	3	1	8	9	-----	6	6
Elbert	-----	3	3	4	17	21	9	9	18
El Paso	9	25	34	13	69	82	4	22	26
Fremont	8	4	12	5	32	37	2	22	24
Garfield	-----	-----	-----	-----	-----	-----	-----	-----	-----
Gilpin	1	6	7	-----	9	9	-----	3	3
Grand	1	3	4	-----	4	4	-----	3	3
Gunnison	-----	3	3	1	11	12	2	8	10
Hinsdale	-----	4	4	-----	-----	-----	-----	1	1
Huerfano	5	9	14	3	10	13	-----	5	5
Jefferson	4	4	8	8	30	38	7	26	33
Kiowa	1	4	5	6	6	12	-----	8	8
Kit Carson	2	4	6	4	5	9	-----	5	5
Lake	7	3	10	9	2	11	-----	7	7
La Plata	1	1	2	4	4	8	1	6	7
Larimer	3	5	8	12	31	43	5	17	22
Las Animas	7	5	12	12	14	26	7	7	14
Lincoln	4	1	5	1	4	5	-----	1	1
Logan	3	8	11	9	16	25	5	4	9

TABLE XVI.
EXAMINATION OF TEACHERS, 1898—Concluded.

COUNTIES	FIRST GRADE			SECOND GRADE			THIRD GRADE		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mesa	4	14	18	1	5	6	2	21	23
Mineral	2	1	3	-----	-----	-----	-----	1	1
Montezuma	2	2	4	2	5	7	1	11	12
Montrose	1	1	2	4	6	10	6	5	11
Morgan	1	4	5	2	6	8	4	4	8
Otero	-----	-----	15	-----	-----	22	-----	-----	5
Ouray	3	2	5	2	1	3	1	2	3
Park	1	4	5	2	14	16	1	6	7
Phillips	2	3	5	5	4	9	5	4	9
Pitkin	1	7	8	-----	22	22	-----	8	8
Prowers	5	3	8	5	9	14	7	10	17
Pueblo	-----	3	3	8	18	26	4	17	21
Rio Blanco	3	1	4	-----	2	2	-----	2	2
Rio Grande	5	7	12	4	13	17	2	3	5
Routt	1	1	2	2	10	12	1	6	7
Saguache	1	5	6	1	5	6	3	5	8
San Juan	1	2	3	-----	1	1	-----	-----	-----
San Miguel	-----	1	1	1	5	6	1	5	6
Sedgwick	1	2	3	4	8	12	1	1	2
Summit	-----	1	1	-----	-----	-----	-----	-----	-----
Washington	1	2	3	4	7	11	-----	3	3
Weld	5	14	19	6	30	36	3	15	18
Yuma	1	2	3	2	6	8	2	8	10

TABLE XVII.
APPORTIONMENT, 1897.

COUNTIES	JANUARY			JULY		
	Amount Apportioned	Deducted for Blanks	Balance Certified to Auditor	Amount Apportioned	Deducted for Blanks	Balance Certified to Auditor
Arapahoe	\$ 10,266 10	\$ 83 03	\$ 10,183 07	\$ 13,867 26	\$ 15 43	\$ 13,851 83
Archuleta	98 24	32	97 92	139 13	42	138 71
Baca	75 87	27	75 60	93 15	1 31	91 84
Bent	192 56	37	192 19	259 24	1 10	258 14
Boulder	1,706 18	25 08	1,681 10	2,271 76	5 71	2,266 05
Chaffee	502 93	12 41	490 52	675 06	64	674 42
Cheyenne	36 57	78	35 79	44 79	1 56	43 23
Clear Creek	572 25	21 13	551 12	799 93	73	799 20
Concejos	1,043 23	10 66	1,032 57	1,367 97	9 05	1,358 92
Costilla	483 98	6 00	477 98	697 26	1 81	695 45
Custer	288 69	6 62	282 07	376 58	5 52	371 06
Delta	409 31	13 21	396 10	619 96	1 42	618 54
Dolores	78 59	26	78 33	103 06	1 18	101 88
Douglas	315 60	25	315 35	379 35	5 11	374 24
Eagle	184 40	2 08	182 32	262 41	6 97	255 44
Elbert	271 76	20 19	251 57	389 26	7 10	382 16
El Paso	3,221 30	1 96	3,219 34	4,747 28	21 65	4,725 63
Fremont	1,162 94	42 25	1,120 69	1,613 34	2 16	1,611 18

Garfield.....	408 70	5 30	403 40	558 52	7 56	550 96
Gipin.....	580 41	9 30	571 11	829 26	1 70	827 56
Grand.....	47 46	56	46 90	74 12	49	73 63
Gunnison.....	379 08	6 97	372 11	482 81	1 50	481 31
Hinsdale.....	83 73	28	83 45	116 14	3 79	112 35
Huerfano.....	824 06	9 06	815 00	1,082 96	7 34	1,075 62
Jefferson.....	795 35	23 66	771 69	1,076 22	10 08	1,066 14
Kiowa.....	63 78	5 09	58 69	76 90	80	76 10
Kitt Carson.....	167 77	8 00	159 77	179 56	3 73	175 83
Lake.....	820 74	10 30	810 44	1,010 02	2 80	1,007 22
La Plata.....	549 88	13 86	536 02	721 65	9 24	711 81
Larimer.....	997 59	24 61	972 98	1,356 87	6 64	1,350 23
Las Animas.....	1,714 34	15 28	1,699 06	2,400 59	8 26	2,392 33
Lincoln.....	72 85	6 49	66 36	74 52	34	74 18
Logan.....	271 46	15 27	256 19	338 92	14 03	324 89
Mesa.....	713 42	14 24	699 18	943 03	5 40	937 63
Mineral.....	92 20	22	91 98	119 31	44	118 87
Montrose.....	379 99	36	379 63	546 23	1 72	544 51
Montezuma.....	204 95	27	204 68	269 15	80	268 35
Morgan.....	203 44	6 41	197 03	281 44	11 15	270 29
Otero.....	672 22	34 40	637 82	1,012 80	97	1,011 73
Ouray.....	267 53	4 26	263 27	382 12	8 00	374 12
Park.....	212 51	7 42	205 09	327 82	55	327 27
Phillips.....	163 54	8 05	155 49	197 80	8 19	189 61
Pitkin.....	519 65	35	519 30	681 41	30	681 11

TABLE XVII.
APPORTIONMENT, 1897—Concluded.

COUNTIES	JANUARY			JULY		
	Amount Apportioned	Deducted for Blanks	Balance Certified to Auditor	Amount Apportioned	Deducted for Blanks	Balance Certified to Auditor
Prowers.....	\$ 208 28	\$ 27 16	\$ 181 12	\$ 287 39	\$ 71	\$ 286 68
Pueblo.....	2,448 63	33 05	2,415 58	3,206 87	7 97	3,198 90
Rio Blanco.....	93 10	25	92 85	127 64	40	127 24
Rio Grande.....	400 84	6 12	394 72	549 80	2 82	546 98
Routt.....	222 19	23	221 96	331 39	63	330 76
Saguache.....	357 31	3 99	353 32	482 02	4 52	477 50
San Juan.....	71 04	23	70 81	110 99	3 15	107 84
San Miguel.....	175 33	8 14	167 19	267 96	4 97	262 99
Sedgwick.....	87 66	5 88	81 78	122 48	4 82	117 66
Summit.....	142 38	2 16	140 22	200 57	4 48	196 09
Washington.....	128 77	2 34	126 43	147 46	57	146 99
Weld.....	1,225 52	29 48	1,196 04	1,621 27	12 19	1,609 08
Yuma.....	170 49	2 99	167 50	219 60	9 87	209 73
Normal School.....	117 59	-----	117 59	145 48	-----	145 48
Totals.....	\$ 37,966 28	\$ 598 90	\$ 37,367 38	\$ 51,667 28	\$ 261 79	\$ 51,405 49

TABLE XVIII.
APPORTIONMENT, 1898.

COUNTIES.	JANUARY			JULY		
	Amount Apportioned	Deducted for Blanks	Balance Certified to Auditor	Amount Apportioned	Deducted for Blanks	Balance Certified to Auditor
Arapahoe	\$ 14,426 98	\$ 185 78	\$ 14,241 20	\$ 11,286 91	\$ 652 89	\$ 10,634 02
Archuleta	144 75	13 10	431 65	130 10	12 41	117 69
Baca	96 91	12 28	84 63	67 70	15 25	52 45
Bent	269 70	21 19	248 51	209 97	27 70	182 27
Boulder	2,363 46	66 61	2,296 85	1,900 39	121 33	1,779 06
Chaffee	702 31	34 43	667 88	532 89	40 68	492 21
Cheyenne	46 60	7 55	39 05	37 12	8 44	28 68
Clear Creek	832 22	12 45	819 77	618 07	29 10	588 97
Conejos	1,423 19	24 90	1,398 29	1,035 21	34 47	1,000 74
Costilla	725 41	19 53	705 88	537 57	44 82	492 75
Custer	391 78	22 00	369 78	298 89	15 61	283 28
Delta	644 99	25 70	619 29	529 77	28 47	501 30
Dolores	101 45	7 36	94 09	65 83	5 30	60 53
Douglas	394 66	24 91	369 75	315 43	34 25	281 18
Eagle	273 00	14 01	258 99	190 32	26 14	164 18
Elbert	474 97	18 78	386 19	321 98	38 83	283 15
El Paso	4,938 90	79 62	4,859 28	3,912 48	218 52	3,693 96

TABLE XVIII.
APPORTIONMENT, 1898—Concluded.

COUNTIES	JANUARY			JULY		
	Amount Apportioned	Deducted for Blanks	Balance Certified to Auditor	Amount Apportioned	Deducted for Blanks	Balance Certified to Auditor
Fremont	\$ 1,678 46	\$ 40 79	\$ 1,637 67	\$ 1,357 80	\$ 89 86	\$ 1,277 94
Garfield	581 07	25 21	555 86	466 12	35 30	430 82
Gilpin	862 74	21 47	841 27	642 09	24 17	617 92
Grand	77 11	8 27	68 84	69 26	11 26	58 00
Gunnison	502 30	21 73	480 57	386 88	39 79	347 09
Hinsdale	120 83	7 39	113 44	100 46	9 71	90 75
Huerfano	1,126 67	27 44	1,099 23	935 68	33 54	902 14
Jefferson	1,119 66	76 32	1,043 34	900 74	70 79	829 95
Kiowa	80 00	17 82	62 18	55 84	24 89	30 95
Kit Carson	186 81	27 17	159 64	154 44	34 11	120 33
Lake	1,050 79	24 95	1,025 84	724 77	44 60	680 17
La Plata	760 87	16 58	744 29	531 88	25 90	555 98
Larimer	1,411 64	94 21	1,317 43	1,084 82	81 81	1,003 01
Las Animas	2,497 49	61 71	2,435 78	1,922 23	62 43	1,859 80
Lincoln	77 53	17 01	60 52	66 76	18 48	48 28
Logan	352 60	23 33	329 27	268 00	45 50	222 50
Mesa	981 09	58 87	922 22	780 93	40 72	740 21
Mineral	124 13	9 64	114 49	91 10	7 69	83 41

Montrose.....	568 28	22 36	545 92	453 96	31 54	422 42
Montezuma.....	280 01	10 99	269 02	231 50	30 93	200 57
Morgan.....	292 80	15 15	277 65	258 33	17 96	240 37
Otero.....	1,053 68	32 68	1,021 00	848 64	48 59	800 05
Ouray.....	397 55	15 74	381 81	295 46	24 74	270 72
Park.....	341 05	21 15	319 90	235 24	22 33	212 89
Phillips.....	205 78	20 35	185 43	146 32	32 62	113 70
Pitkin.....	761 70	19 28	742 42	570 02	40 84	539 18
Prowers.....	298 99	25 01	273 98	266 83	29 58	231 25
Pueblo.....	3,336 31	92 58	3,243 73	2,834 83	106 04	2,728 79
Rio Blanco.....	132 79	12 20	120 59	127 60	11 70	115 90
Rio Grande.....	571 99	20 47	551 52	437 11	36 80	400 31
Routt.....	344 76	21 64	323 12	261 14	28 10	233 04
Saguache.....	501 47	27 59	473 88	399 04	31 45	367 59
San Juan.....	115 47	10 86	104 61	91 10	8 54	82 56
San Miguel.....	278 78	12 18	266 60	212 47	15 69	196 78
Sedgwick.....	127 43	19 14	108 29	104 83	30 27	74 56
Summit.....	208 67	14 19	194 48	141 02	11 39	129 63
Washington.....	153 41	16 67	136 74	108 57	27 77	80 80
Weld.....	1,686 71	66 99	1,619 72	1,356 26	90 60	1,265 66
Yuma.....	228 46	26 60	201 86	159 74	27 05	132 69
Normal School.....	151 35	30 00	121 35	101 71	21 03	80 68
Totals.....	\$ 53,810 51	\$ 1,723 93	\$ 52,086 58	\$ 42,226 15	\$ 2,780 34	\$ 39,445 81

APPROPRIATION AND EXPENSES, 1897.
CONTINGENT FUND.

To appropriation	\$500 00	By vouchers drawn by Hon. A. J. Peavey	\$214 49
		By assistance	3 50
		By printing	8 40
		By traveling expenses	272 45
		By balance	1 16
	\$500 00	Total	\$500 00

APPROPRIATION AND EXPENSES, 1898.
CONTINGENT FUND.

To appropriation	\$500 00	By traveling expenses	\$324 65
		By assistance	17 00
		By repairs typewriter	5 00
		By model school room	10 00
		By balance	143 35
	\$500 00	Total	\$500 00

APPROPRIATION AND DISBURSEMENTS.
CLERICAL FORCE.

To appropriation for deputy, 1897 and 1898	\$3,000 00	By salary of deputy, 1897 and 1898	\$3,000 00
To appropriation for clerk and stenographer, 1897 and 1898	2,000 00	By salary of clerk and stenographer, 1897 and 1898	2,000 00
Total	\$5,000 00	Total	\$5,000 00

REPORTS
OF
County Superintendents
1897=1898.

REPORTS OF COUNTY SUPERINTENDENTS, 1897.

BOULDER COUNTY.

The year 1896-97 has been a very successful one to the schools of Boulder county. One new district was established. The number enrolled in the schools has largely increased. The average daily attendance has not increased in quite the same proportion, but has considerably increased during the year, with two exceptions in the earlier part. No person holding a certificate below the second grade taught in the county. Though by a late decision, I am not allowed a deputy, I have succeeded in visiting all the districts of the county as often as the law requires. Among the additions to our school buildings is the brick building of District No. 16 near Boulder. There may be handsome district school buildings in the United States, but it was never my good fortune to see one. The slight decrease in valuation of the school buildings results, I think, from a more just estimate of the values.

CLEAR CREEK COUNTY.

A law should be enacted to compel county treasurer or assessor to certify district valuation to the county superintendent.

DOLORES COUNTY.

The first teachers' association of Dolores county was organized September 6, 1896, by county superintendent. About twelve meetings have been held. The books adopted by the state teachers' reading circle were followed as a course of study.

Dolores county "Teachers' Association and Reading Circle Temporary Loan Library" was established with a number of

latest educational journals being kept on file. These books and papers were used as reference. Membership in said association "extended to all persons who are interested in educational advancement in our county." The interest in the movement was continuous and extended to others outside the profession. Records show, however, that for non-attendance of local teachers in the schools, and for want of books by authors under discussion, the association adjourned in March, 1897, until said books could be secured.

The first Dolores county "Public School Circulation Library" is being established. Seventy-three volumes secured through City Librarian Dana, of Denver, and sixty-three short classics have been purchased, for all the grades of the common schools. Library shares of ten cents each will be sold throughout the county, and together with a "book reception" to be held, we hope to be able to purchase the remaining needed volumes. These books will be sent out periodically to the different schools by the county superintendent in appropriate cases of sixty volumes each.

Thanksgiving, Washington's birthday, and Arbor day were observed by literary programs in all the grades of the Rico schools. Lavender observed Christmas and closed its school with a literary program on the last day. Two literary societies were organized about the middle of the year, in the principal's room at Rico; met two or three times and discontinued. In view of the fact that there have been no organized reading circles among the pupils for the last two years, and no literary entertainments given by the pupils for libraries, or other purposes, as has been done in the past, this branch of our work may be considered to have retrograded. Supplementary reading can not properly, and should not, take the place of such work.

Kindergartens have increased in number, and greater interest is taken in this work. Improvement has been made in all primary work under the supervision of Miss Carrel.

The grading of the schools of the county has been improved, and with a strieter adherence to written monthly examinations, and the use of monthly test questions which are given by the county superintendent, the schools are bound to advance in proficiency and real merit. The Lavender school, under the direction of Miss Dunning, had its longest term of school this year, and reports increased interest in its 90 per cent. attendance. The school population of this county has not decreased. We need money and more room for increased kindergarten and high school

work. The Dolores county children are eager to learn, bright, deferential, and deserving.

DOUGLAS COUNTY.

In most of the districts of the county, the educational spirit is active, and marked progress is evident. Several new buildings have been put up during the year, and some are in process of erection. Each year's corps of teachers seems to be an improvement on the preceding one. "As is the teacher, so is the school."

EAGLE COUNTY.

The schools are in a healthy condition. There is a commendable public school sentiment among the people. Children come and grow, whether times are good or bad, whether gold is money or silver is money, and the children and their well being bind their parents' minds to the schools, and though the people disagree on other things, they are one in the desire to have efficient schools.

GILPIN COUNTY.

The past year has been one of general improvement in the schools, as a rule. While a falling off in enrollment and attendance is noticeable in two or three of the smaller districts, a decided increase is noticeable in the larger ones. The class of teachers employed has also been of a higher order generally when changes were made. But three persons employed have held third grade certificates, and as more interest than ever before has been shown in association and institute work, it may be considered that more professional pride prevails, and better methods will be the order of the day. Our country districts labor under many discouragements, the property valuation being so low that money to run the schools is scarce, and in several cases the necessary term of school is only fulfilled through assistance from the county, our commissioners being always ready to furnish the help needed. As these districts are rugged and sparsely settled, the attendance is irregular, and the cost per pupil is high; yet, as the few months' schooling here obtained are the

children's sole opportunity for an education, it is endeavored to fix the idea that the school must be maintained, even if but few are benefited.

GRAND COUNTY.

The school at Hot Sulphur Springs is graded according to the state course of study. The Kremmling school is now being graded, and I am working with them and trying to persuade the district to buy the text books. These are the only schools in session during the winter season.

LOGAN COUNTY.

Teachers and pupils are manifesting great interest in school work. The state course of study is being adopted and schools classified accordingly. Our institutes were fairly well attended.

MONTESUMA COUNTY.

To one who is acquainted with the history of Montezuma county, its educational progress is remarkable. A few years ago the territory now embraced by Montezuma county comprised one school district in La Plata county, with a school population barely sufficient to support one school six months during the year. But note the change: this same territory is now divided into seventeen school districts, with a school population of six hundred and eighty; it boasts of twenty-two school houses valued in the aggregate at \$17,540.00, while there are from twenty to twenty-five teachers employed in the county who receive annually from four to five thousand dollars.

MONTROSE COUNTY.

1. Children are not properly furnished with books. In those districts which furnish free text books, the supply is more nearly adequate.

2. One secretary writes: "If the blanks furnished principal and teachers corresponded with this blank, the work would be facilitated and accuracy assured. This applies also to county

treasurers' blanks. They seem to be different each year, and always different from this blank." It is to be deplored that all these blanks do not correspond.

3. Another secretary writes: "Our district treasurer has never made a report, and as it is the custom for him to deposit all money with the county treasurer, there is no need." If the superintendent is to have a statement from the district treasurers, blanks for that purpose sent out by the state superintendent would be of assistance. Few district treasurers deposit money with county treasurer.

4. The schools would be improved, in my opinion, if the third grade certificates were abolished.

MORGAN COUNTY.

The schools of Morgan county are in a flourishing condition. The teachers are live, energetic, and faithful. Twelve pupils from the rural schools completed the eighth grade work this year, and many more are working with this end in view for 1898. Two teachers' meetings were held during 1897; these were well attended by our teachers.

MESA COUNTY.

Three new districts have been formed during the past year. Three districts have voted special library series. Two new school houses have been built, and the number of teachers increased from fifty-five to sixty in the county.

The work of making the election of school boards uniform was again taken up with good success. The salary of teachers has suffered no material reduction.

There were four graduates from the high school, and the number of high school pupils much increased. Our normal institute was held at Gunnison, August 8-20, 1896. Mesa county sent a good representation. Two county conventions have been held during the year. I have visited all the schools twice, except one. Many I have visited much oftener.

OTERO COUNTY.

The schools of this county are in a progressive condition. The school boards are manifesting an increased interest in the

schools and are endeavoring to employ the best teachers obtainable. A large number of our teachers hold first grade certificates, while a few hold state diplomas from this and other states. The teachers are progressive and take every opportunity to improve themselves in their profession. The normal institute held in La Junta (August 16-27) was a success in every respect, a larger number being enrolled than ever before. There were seventy-five enrolled, fifty being enrolled from Otero county (the number of teachers employed in the county being fifty-five). Our teachers' associations are well attended both by teachers and patrons. A larger per cent. of the pupils of school age are in the schools of this county than ever before. Several new school houses have been built during the year, all of which are large and substantial buildings. District No. 4 has let the contract for half of an eight-room building which will be completed by the first of January. District No. 26 is building an additional room to their two-room brick at Fowler, and will employ three teachers the coming school year.

The number of library books has increased from 400 to 520 in the last year, and a number of districts would put in libraries if they were permitted to do so in accordance with the law. A large number of diplomas were issued to pupils passing the eighth grade last spring, which, I believe, has increased the interest in school work. Our rural schools are well equipped with school apparatus, but many of them have been duped into buying expensive charts which are seldom, if ever, used.

The reading circle books were extensively read last year by the individual teacher, but owing to distance there was no reading circle organization effected.

The outlook is very encouraging for a good school year the coming winter. The districts are all in good shape financially, and have endeavored to get good teachers by consultation with the county superintendent and otherwise. I only regret that we have not some system of grading in the rural schools by which they can constantly pursue their work uninterruptedly without being required to conform to the changes made to suit the whim of the individual teacher. I think that a record book giving a complete record of each pupil would be very effective, whereby the succeeding teacher would be obliged to recognize the work of her predecessor just as the city teacher recognizes the work of the grade teacher below her.

PARK COUNTY.

Park county has had a good corps of teachers for the past year and much excellent work has been done. The schools are better graded than they have been before. The state course of study has been followed as nearly as possible.

Several districts have started libraries or added to those they already had. More money has been spent for useful and necessary appliances and less for worthless articles than heretofore. Some districts have voted for free text books. Nearly all districts are out of debt, and in several of the districts commodious and well ventilated school houses have replaced poor log buildings. In many of the rural districts the length of term has been extended from three to five or six months.

PUEBLO COUNTY.

For the most part the observations of last year apply to the present. There has been no increase (on the face of the returns) in the school population, though this apparent fact is believed to be attributable to erroneous enumeration in previous years. There has been a steady gain in enrollment since 1892.

There are signs of a demand for higher standards of qualification in teachers, both in town and county. More interest than ever has been taken in the county teachers' association. The districts lying under the Bessemer ditch find themselves obliged almost yearly to increase their facilities. The prospective Salvation Army colony is likely to make still greater demand.

ROUTT COUNTY.

There has been considerable advancement made in all the schools of the county. A large number of the county districts have succeeded in furnishing their schools with maps, globes, charts, and other apparatus for the school room. Some of the districts have bought expensive charts which are not used as frequently as they should be, and have neglected to furnish the school with a dictionary. Considerable grading has been done in the rural schools, and the state course of study is followed in almost every district.

Twenty-three pupils completed the eighth grade and were granted diplomas. A strong effort is being made to establish a high school at Craig, and also at Steamboat Springs. A county teachers' association was organized during the past year with a membership of twenty-one teachers.

SAN JUAN COUNTY.

School opened in September, 1896, with crowded rooms. For the first time, an assistant principal was placed in the Silverton school to teach the higher branches. Nine pupils passed from the eighth to the ninth grade in June last, making two grades in high school work. The state course of study was followed throughout the year. The law relating to the study of the nature of alcoholic drinks and narcotics was observed. No cases calling for the enforcement of the compulsory law. The amount of \$87.25, given by the Burns' club of Silverton, was spent in books for the school library, all standard works. From the proceeds of an entertainment (\$60), reference books were bought for use in the advanced department. The outlook is bright for next year's school work.

SAN MIGUEL COUNTY.

The past year has been unusually full of interest and encouragement in school matters. There has been a remarkable increase in school population throughout the county, and District No. 1, Telluride, is now of the second class. The schools in District No. 1 are now comfortably established in the new electrically lighted and steam heated \$45,000 school house, which contains, besides six school rooms, an assembly room, four class rooms, separate play rooms for boys and girls, janitor's quarters, etc.

In District No. 3, Ophir, Ames, two new school houses are finished and occupied. In District No. 7, Cedar, a new school house has been built almost entirely by the personal efforts of the residents. In District No. 8, Sawpit, Placerville, contracts are now preparing for two new school houses, and in District No. 6, Norwood, a second school has been established in fairly comfortable rented quarters.

For the first time in the school history of the county there were graduates from the eighth grade this year, with the promise of a larger repetition of this occurrence next June.

The tone among the teachers is noticeably higher; the people throughout the county are now aroused, to some extent at least, to the importance of their educational interests, and would not themselves consent to such a standard as a few years ago appeared perfectly satisfactory. Every school house in the county, with one exception, has now some books for a library, and five of the schools own libraries of from fifty to three hundred and seventy-five volumes. In the other schools, the books referred to were obtained through the considerate offer of the Denver Public Library, being volumes discarded there, but which are much better than none. These were divided into sets of from fifteen to thirty volumes and sent to the different districts last fall, each set being sent this year to a new district.

Five of the eight districts of the county have adopted free text books, and it is certain that the Telluride district, as soon as it has cleared the floating debt made necessary by the building of its new school house, will fall into line.

SUMMIT COUNTY.

Summit county has made improvement along some lines. Three new districts began libraries the past year. In one, the teachers and children raised the money by entertainments, besides the regular school work, and presented the highest average in scholarship at the final examinations.

Five of the eight districts of the county now have libraries.

WELD COUNTY.

It has been my good fortune to hold the office of county superintendent for four full terms in Weld county, two of them long ago and two just drawing to a close. The wealth and importance and efficiency of our schools have increased greatly since I first became acquainted with them twenty-one years ago.

Last year there were in the county 4,327 persons of school age, 3,453 pupils enrolled in the public schools, more than \$52,000 paid to teachers in salaries, all in seventy-five organized school districts. There were eighty-three school houses containing one hundred and twenty rooms, in which taught one hundred and nineteen teachers, and the buildings were valued at nearly \$168,-

000. The total receipts for last year were \$102,078.41, and the total paid out, \$83,351.05.

I believe that the questions and circulars sent out from this office have been of great service. Attention has been directed to needed reforms. When it was generally known by all school boards in the county that 75 per cent. of all our one hundred and twenty teachers were holders of either first grade county or state normal school certificates, it seemed as if few directors felt that they had use for teachers holding third grades. Attention was called in these circulars to the fact that good reading must always be the foundation of an education, and that the child must fail in his recitations if he is unable to intelligently read the text. The result was that in many of the schools more pains were taken to supply more supplementary reading matter, and greater attention was paid the study of reading lessons, although not nearly so much as there should be.

The county superintendents of Jefferson, Boulder, Larimer, and Weld counties entered into an agreement to make out examination papers for the fifth, sixth, seventh, and eighth grades in turn, each printing enough to supply all four counties. These questions were sent out for the months of February, March, April, and May, and emanating from the minds of four different persons, were undoubtedly of greater value than if prepared by one officer.

The plan has been tried in this office of sending out letters to numbers of schools and the teachers have had hundreds of pupils, large and small, answer these friendly communications. Some of these letters have made a specialty of treating of early Colorado history and have been kindly received. It seems to me that in our sparsely settled counties, it would be well to keep in touch with the scattered schools by means of these friendly letters.

Our teachers have done good work along the line of teaching the effects of alcohol and narcotics upon the human system. Many of our teachers keep a good watch upon the play ground, as it is easier to prevent vicious acts and bad language than to discipline the offenders after the acts have been committed. Three things I try to do in every school, viz.: To examine the daily register, inspect the school premises to note if objectionable practices are permitted, and lastly, that the teachings regarding strong drinks and the use of tobacco are attended to.

YUMA COUNTY.

Four years of dry weather, together with the small percentage of tax collected, have seriously affected the school interests of this county. The weaker districts will be consolidated as rapidly as circumstances will permit. Our teachers are showing an increased interest in the work of the normal institute, reading circle, and teachers' association. With a good crop already harvested this year, and a hopeful outlook for the future, we expect to increase the efficiency of the public schools of Yuma county during the coming year.

REPORTS OF COUNTY SUPERINTENDENTS, 1898.

ARAPAHOE COUNTY.

In addition to the information contained in the regular annual report from this office for the year ending June 30, 1898, I wish to say that there is a marked advance in educational affairs in this county during the past year. Several districts have adopted free text books, the number thus furnishing books being now forty, while several others are favorably considering the matter. There is an increasing desire on the part of directors to employ teachers who hold first grade certificates, and the county superintendent is loyally supported by directors in efforts to favor the employment, other qualifications being equal, of home teachers, thus giving encouragement to our home schools.

With decreasing valuations in the assessment, taxpayers have, quite generally, been willing to increase the special tax levies, so that the schools might not suffer.

Several graduates of our State Normal school have recently been employed in this county, and are giving good satisfaction.

Kindergartens, in connection with the public schools, have been maintained during the year in East Denver, District No. 1; West Denver, District No. 2; Harman, District No. 4; South Denver, District No. 7, and Montclair, District No. 44.

There have been held during the year three regular meetings of the county teachers' association, all of which were well attended by teachers.

I wish to commend for favorable action by the legislature, the changes in the school law of this state, prepared by a committee of the county superintendents' association, in a circular recently issued, and to suggest that the law needs much revision in many particulars.

An appropriation should be made in accordance with the law as it now stands, for support of the normal institutes.

Ample provision for the support of good schools is the best safeguard of any community and of the nation.

Institute, Third District—The eleventh annual session of the normal institute of this district, Arapahoe county, was held in Denver, August 1-12, 1898. Eight regular instructors, in addition to the conductor, were employed, and eight lecturers also rendered assistance, as appears in copy of schedule of exercises, attached hereto. The enrolled attendance was the largest in the history of institutes in this state, being 406, of whom 401 paid the fee of one dollar each. The work was divided into sections, thus making the exercises elective, and resulted in greatly increased interest and profit to those in attendance. The teachers of the county loyally supported the effort to make the work of the greatest good, and demonstrated their professional spirit by very regular attendance upon all exercises, and extra demands for several hours' time daily in personal consultation with instructors, all of whom rendered willing and valuable aid in this way.

BOULDER COUNTY.

The school year 1897-98 has been, I believe, fully up to its predecessors in every respect, and I have every reason for saying that considerable progress has been made in Boulder county.

The year has been singularly free from trouble in any of the districts. I have issued diplomas to seventy-one graduates from the eighth grade, and held exercises at nine different points in the county. The county teachers' association met three times during the year, once at Boulder two days, and at Longmont and Lafayette one day each; the sessions were well attended and interesting. I can state, as I did last year, that practically no teacher holding a third grade certificate has taught in the county.

COSTILLA COUNTY.

The public schools of Costilla county have not yet arrived at the topmost round of the ladder of perfection, but they are ambitiously pushing onward and upward. Progress has been made during the past year. The people are slowly learning the important lesson that in school work "cheap help" is not economy, and that six months under a good teacher well paid is worth more to the children than nine months under a poorly qualified, meagerly paid teacher.

The "free text book" idea is becoming more and more prevalent and, one by one, the schools are falling into line in the adoption of that plan.

Educational fads find here but little encouragement. The average school term, with us, is all too short for best progress in the "fundamentals," and but little time is spent by the teacher and pupils in loitering along the way of learning to gather posies. The school dietary is one rather of substantials than of delicacies, and the "dessert" is not an invariable accessory to the "square meal" that is served up for the child's mental digestion. Our people have not yet grown beyond the notion that the child should be taught in school those branches of knowledge which are likely to be of most service to him in the practical affairs of life. As the school district grows in wealth, the school season will become longer, and more time may be devoted to teaching the little tots how to become natural philosophers, geologists, botanists, etc., but at present the school term is so short that effort must be confined within the most useful lines and work must be done at white heat. With us, the "three R's" are just now receiving special attention. Botany, zoology, geology, and the other "ologies" are left for the higher grades. We think it best not to erect the superstructure until the foundation is laid. In all this we may be a bit old-fashioned, but results are what we are after, and the fashionable boulevard does not always furnish us the most direct route for reaching them.

The counties of the tenth normal institute district are united in an organization known as "The San Luis Valley Teachers' Association," which holds four meetings per year. These meetings are usually well attended, and the discussion quite interesting and instructive. The topics presented are generally of a very practical nature and chiefly such as bear upon the experience of the rural teacher. Attendance at our normal institute is fairly good. Those who attend evidently come for business and go away loaded down with ideas suited for practical every-day use in the school room.

DOLORES COUNTY.

Each grade of the public schools has been taught by able teachers, in the election of which our school boards may be congratulated. The regular state course of study has been followed as far as possible in the different grades, and the average standing of pupils, in daily and in examination reports, exhibits a

gain over the past. Considering the peculiar conditions of our county, the educational progress of our school population is eminently satisfactory. The new school library established last year has been a success, and the number of volumes is steadily increasing. A considerable portion of our Rico population is of foreign birth or parentage, and in addition to their regular educational care, a good work is being conducted by patriotic exercises. Several of the higher branches have been taught our older scholars, out of school hours, by Mr. A. R. Lynch, principal of the Rico schools.

DOUGLAS COUNTY.

The educational spirit of the county is good, and the condition of the schools as good as may reasonably be expected under the existing order of things.

EAGLE COUNTY.

There is an apparent want of interest in school room work by parents and members of boards.

GILPIN COUNTY.

The past year has been one of activity and progress in educational affairs in this county. The institute and association attendance has been greater than ever before, the teachers entering heartily into the work of both and showing in improved methods and greater professional zeal the benefits obtained. Extensive additions have been made to the libraries, from which an increasing number of books is drawn. The laboratory of the Central City high school has been thoroughly refitted, and much practical work has been done by the pupils along scientific lines. This school is obtaining a large number of pupils from the adjacent towns, and is gaining an excellent reputation. The grade work of the Black Hawk school is very strong and reflects great credit upon both principal and assistant teachers. Much progress has been made towards grading the county schools and the spirit of progress is nowhere more apparent than among our rural school teachers.

GUNNISON COUNTY.

The educational work in Gunnison county is progressing. A new course of study has been adopted for the Gunnison schools in which considerable stress has been placed on literature and nature study in the grades. The rural teachers, also, are studying these subjects with the intention of introducing as much of this work as their time and resources will permit.

The Speer method in arithmetic is receiving considerable attention and is being introduced into a number of the schools.

JEFFERSON COUNTY.

The relations of the county superintendent with the patrons, school officers, and teachers have been very pleasant. I have had the most hearty co-operation in every effort to improve the schools of the county.

The Golden high school has made great progress in the last few years. Superintendent Triplet has used his untiring energy and efforts in raising his school to the highest standard possible, and I feel that his efforts have not been in vain, when the Golden high school graduates are admitted without examination to the Ann Arbor university.

A high school was established last year at Wheat Ridge, and under the efficient management of J. W. Ellison is fast coming to the front.

Circulars were sent out from this office, requesting that the 20th day of May be set apart from other school days as Bird day.

I have found the finances of the districts in very good condition, showing the efficiency of the boards of directors. One new district has been organized, which is now conducting a successful school with a membership of twenty-one pupils. Several new school buildings are being constructed.

Our county teachers' association was a success.

LINCOLN COUNTY.

Four pupils finished the eighth grade last year and received diplomas. The examination was prepared by the county superintendent last spring for the first time in this county. We hope to be able to have examinations prepared by the county super-

intendent for all graded schools each three months. Our tax is smaller than ever before, and we have more schools; also, we pay as high wages as heretofore. This is due to the business judgment of the directors.

The grading of the schools and the granting of diplomas has created marked interest, and serves as an inspiration for a still higher standard.

LOGAN COUNTY.

The tendency of all school directors is in the direction of securing first grade teachers.

Teachers' associations are only fairly well attended. This is accounted for by the fact that many of the teachers live at a great distance from the county seat. District institutes are well attended. Educational journals are read by nearly all of the teachers.

MESA COUNTY.

Two new districts have been formed this year.

Library work has made unusual progress throughout the county during the past year. Three new school houses have been built during the year.

I have endeavored to maintain a faithful and systematic supervision over the country schools, and have twice visited every school but one in the county, and some oftener.

Two county conventions were held, one at Grand Junction, and one at Collbran. Both were well attended.

There were thirty-four promotions from the eighth grade in the country schools to the high school. There were nine graduates from the high school.

MINERAL COUNTY.

The financial condition of the county is improving.

The people of the county show much interest in educational matters.

MONTEZUMA COUNTY.

Some of the schools of the county are doing fairly well, but in some of the districts the people live so far apart and have so

little property that they can maintain school only from three to four months in the year. Some are unable to do even that much. In the more wealthy and populous districts, the schools are improving, but on the whole, the terms are short and wages of teachers low. The teachers of the county are mostly young, inexperienced, and untrained.

PHILLIPS COUNTY.

The general return of prosperity to the county favorably affects the schools. The districts are in better shape financially and are demanding better schools. Only two districts in the county failed to hold the required four months of school. Thirty-one out of thirty-six teachers attended the normal institute held July, 1898, and twenty-one have organized themselves into a reading circle to take up a university extension course. In conjunction with Sedgwick county, two associations were held last year, at which a majority of the teachers of both counties were present.

SAN JUAN COUNTY.

For the first time, school opened at Howardsville in September, 1897, with an enrollment of twelve. This school continues during the summer, closing in October.

On June 13, the first kindergarten was opened with an attendance of forty-five. Miss Cora A. Edwards is in charge of the kindergarten.

The financial condition of the county is better than ever before.

SAN MIGUEL COUNTY.

There has been a material advance in the schools of San Miguel county during the past year. Three new schools have been opened and it is probable that another will shortly begin. Three school houses have been built, and one new school room rented. The percentage of attendance is larger than usual, and there seems to be an increased and healthy interest in school matters developing among the parents and citizens which has, of course, a very happy effect upon the children. At this date, September 1, every school district in the county, with one exception, and that a very small, poor district, has adopted free text books and in all of these, except one, the text books have been

purchased. Every school, except one, has a few books as the beginning of a library, and nearly every school has made an appropriation for the purchase of books for a library.

Every teacher last year belonged to the reading circle.

SEDGWICK COUNTY.

Good crops, better prices for stock, higher wages, and, in consequence, an encouraged class of citizens, have exerted stimulating influences upon the schools of Sedgwick county during the past year.

There is more uniformity in the school work than ever before. The state course of study, so far as possible, is followed. Free text books are furnished by all the districts, and the county is gradually working toward text book uniformity. During the past year more than one hundred dollars was raised by school entertainments for library purposes. Five school rooms are now provided with libraries and organs. Almost all the school rooms are well supplied with charts, maps, etc. The teachers are energetic. They read school journals and pedagogical works, attend associations and institutes, and are not only trying to do good work for the present, but are striving to advance in their profession. A teachers' reading circle will be organized this fall. For the past two years, this county has joined with Phillips county in association work.

WELD COUNTY.

Nearly all the districts in this county are in satisfactory financial condition and able to support good schools for eight or nine months in the year. A large majority of our rural school teachers hold normal diplomas, or first grade certificates. Only four per cent. teach on third grade certificates. Our rural schools still suffer from insufficiency of good literature. Less than one-half the districts have libraries, or any plan for bringing good reading matter into the home. This condition is improving, and five different schools have procured libraries since January 1.

YUMA COUNTY.

This has been a very satisfactory year in the school work of the county. The indebtedness of the districts has been greatly

reduced, and there remains but little financial burden to embarrass the taxpayers. Districts Nos. 6 and 12 have built new school houses, and District No. 18 will build before the schools open in September. The teachers have shown commendable zeal by their attendance upon the summer school at Wray and the teachers' institute at Holyoke. District No. 2 is doing the work of ten grades. The weaker districts are being consolidated as rapidly as possible. The outlook for the schools of Yuma county is very encouraging.

DECISIONS

BY THE

State Superintendent

1897=1898.

DECISIONS.

BIBLE.

The courts of Colorado have not rendered a decision concerning the interpretation of section 8 of the 1897 school law, which has been construed by this office as follows:

"The use of the bible as a text book in the public schools, and the stated reading thereof in such schools, without restriction, 'has a tendency to inculcate sectarian ideas,' and is sectarian instruction. Sectarian instruction is instruction in the doctrines held by one or other of the various religious sects, and not by the rest. State vs. School Board, 44 N. W. Rep. (Wis.), 975 (1890).

"The stated reading of the Bible in the public schools, as a text book, may be 'worship,' and such reading in the school room makes it a place of worship within the meaning of the Wisconsin Constitution, to which use a school house can not be devoted as against an objecting taxpayer. State vs. School Board, 44 N. W. Rep. (Wis.), 979 (1890)."

BONDS.

A district voting bonds for the building of a school house can not legally bind itself to set aside part of the proceeds of these bonds for another school house to be built later in another part of the district. A remote part of the district can not take steps after bonds have been voted, and before they are issued, to set itself apart and form a new district, thus avoiding its liability for interest and principal on the bonds.

It is illegal to vote bonds in case there are not twenty voters in the district.

A board of directors can not legally establish a sinking fund for the payment of bonds.

CERTIFICATES.

"If a county superintendent desires to obtain a certificate to teach in the county in which he resides, he is advised to appoint a deputy to conduct the examination and pass upon the answers given to the questions propounded; also, to issue a certificate in accordance with the result of the examination." Dick.

Second and third grade certificates can not be legally renewed.

The law of Colorado does not recognize certificates issued in other states.

A first grade certificate may be renewed indefinitely, without examination, in the county in which it was originally issued.

The school law makes no provision for the issuing of a certificate of like grade to the holder of a second or third grade certificate.

No certificate can be renewed after the expiration of the time for which it was issued.

The clause "Provided, however, that no more than two certificates of the same grade shall be issued to the same person," is interpreted as referring to third grade certificates. Section 16, 1897 School Law.

"Permission to teach one month after the expiration of certificate" is for the purpose of providing against closing the school in case of the failure of the teacher to obtain certificate at the last county examination. Section 60, 1897 School Law.

The endorsing of a teacher's certificate issued in another county is optional with the county superintendent.

Applicants for teachers' certificates must take the county examination at the time provided by the school law.

Applicants for teachers' certificates must take the examination at such time and such place as is provided by law.

A person can not be legally employed to teach in the public schools for any length of time, however short, unless such person has a certificate to teach issued by the proper city, county, or state authorities.

Section 15, Colorado School Law:

The county superintendent "may, however, in case of emergency, recognize county teachers' certificates issued in this or other states, by endorsing thereon the words 'good until the next regular county examination:' Provided, That the certificate so endorsed shall be in full force at the date of such endorsement,

and shall not be renewed, extended, nor show a previous endorsement thereon."

Under this act, an emergency may be said to exist whenever there is a vacancy in any school in the county, and there can not be found in the county a teacher who holds a certificate, and who is qualified to teach that particular school, and whose services can be secured.

I do not say that there may not arise other conditions which, in the opinion of the county superintendent, might constitute an emergency, but the above I give as a general rule.

In all cases, the endorsing of certificates is optional with the county superintendent.

A district board has not, in law or equity, a right to deliberately make its circumstances for the purpose of taking advantage of the emergency clause in that section of the statute which provides for granting and endorsing teachers' certificates.

Circumstances created for a certain purpose do not constitute an emergency, and should not be construed as such.

Teachers' certificates issued by the board of directors of first class districts must be reported to the county superintendent.

COUNTY HIGH SCHOOL.

All pupils in the county under the age of twenty-one years, who are educationally qualified, are classed as high school pupils, and draw state and county money whether they attend school or not.

A pupil can not be listed as a high school pupil and also as a pupil of the district in which he resides and draw general school money for both common and high schools.

COUNTY SUPERINTENDENTS.

A county superintendent of a county of the first class may employ a deputy, whose salary shall be fixed by the board of county commissioners, and who shall be paid from the county treasury.

A county superintendent is not entitled to compensation, either per diem or mileage, for attendance at the normal districts' institutes.

When an applicant presents himself for the county examination, the county superintendent has no course other than to re-

ceive and grade the papers and report the same to the superintendent of public instruction. A county superintendent can not legally withhold a certificate at the request of a person who, as an applicant, appears at the examination.

DISTRICTS.

Section 32 of the School Law provides for distributing any school funds remaining to the credit of a district when a new one is formed from one or more old ones, but I have found no law providing for the payment of the indebtedness of a district in case it should be disorganized and wiped out of existence. To my mind, it follows that the legislature never intended that a school district should be disorganized until all its outstanding obligations are provided for. I do not say that the superintendent might not declare the district annulled, and at the same time provide in the order in which it was contracted for the payment of such indebtedness by the district to which the territory should be attached, providing such district should consent thereto. He certainly should not make an order annulling the district until some provision is made for the payment of its outstanding warrants, and if he have done so, in any case, it could not have the effect to cancel such indebtedness or make it invalid. Carr, Attorney General.

In the matter of the presentation of a petition for the organization of a new district, the statute provides that, if, in the judgment of the county superintendent, the school interests of the districts affected by the proposed change will be best promoted by such change, he shall direct some one of the petitioners, who is a legal voter, to notify each elector residing within the district so to be formed, etc., to attend a meeting at which the question of organizing a new district shall be determined by vote of the electors.

This language leaves it entirely to the discretion of the county superintendent whether or not he will call such meeting, or whether or not the best interest of the districts will be promoted by such change. The matter is not subject to review by the state board of education, unless it appear that there is an absolute abuse of such discretion.

A district may be annulled when, for the period of one year, it has failed to maintain a school, keep up its organization of officers, and make its annual report as required by law.

In the organization of a new district, the county superintendent may transfer a family to another district.—Section 29, 1897 School Law.

A portion of unorganized territory may be annexed to a school district by the county superintendent upon petition of the majority of the legal voters resident within the territory to be so annexed.

More than one section of unorganized territory may be added to the district upon petition to the county superintendent of a majority of the legal voters resident within the territory.

A school district of the second class becomes a first class district when the census returns show that said district has a school population of one thousand or more.

GENERAL FUND.

"The general fund may be used only for teachers' wages, and necessary current expenses, until the school has been conducted for a period of ten months in one year." Peavey.

If a school district has failed to hold school for one year, or has failed to keep up its organization, the funds belonging to such district should be turned into the county general fund, unless its territory is attached to another district, in which case, the money should be transferred to the district to which it is attached.

HOLIDAYS.

Does the repealing of section 1630 of the general laws of 1883 repeal or have any effect on section 38 of the chapter designated "Schools" in the Session Laws of 1887?

"Section 1630 of the General Statutes of 1883 is taken from the General Laws of 1877, where it appears as a special act concerning holidays, and it relates only to the matter of acceptances and payments of bills of exchange and promissory notes, and to the matter of holding courts. It does not relate in any way to the public school system. It provides that the 30th day of May, 4th of July, 25th of December and any day appointed or recommended by the governor of the state or president of the United States as a day for fasting or thanksgiving, shall be considered the same as the first day of the week, commonly called Sunday, for all purposes designated in the title of said act. The general

assembly in 1897 in the repealing act referred to, for some unaccountable reason, repealed this section. Probably it was an inadvertence.

"The chapter designated 'Schools' in the Session Laws of 1887 is an act making sundry amendments to the school law as it appears in the General Statutes of 1883. Section 38 referred to in your letter is an amendment to section 79 of the acts of 1883. The said section simply defines 'school year, a school month, and a school week.' The amendment re-enacts the original section, and then adds the following:

"The term "national holidays" in this chapter shall be construed to mean Thanksgiving day, Christmas day, New Year's day, Washington's birthday, Decoration day, and the Fourth of July.'

"After a careful examination of the act of 1883, I find the term 'national holidays' appearing in but one place, namely, in section 75, or general section 3070, wherein it was enacted that:

"No district shall be entitled to receive, nor shall it receive, any portion of the general or county school fund, unless there was maintained in such district, during the year next preceding the time of apportionment, a school under the charge of a licensed teacher, or a succession of licensed teachers, for and during 60 school days. All legal and national holidays, and all days not exceeding six that the school may have been suspended by reason of the attendance of teachers upon teachers' institutes, shall be included in the 60 days aforesaid.'

"The days mentioned in the act of 1887 are the same as those designated in the act of 1877 and 1883, with the addition of 'Labor day.' The effect of the two statutes, namely, section 3070 of the act of 1883 and section 38 of the act of 1887, is to include the days mentioned in the 60 days required by school districts to maintain their schools in any year, and by implication to make those days legal holidays for the public schools.

"The repeal of section 1630 of the general statutes of 1883 does not in any manner affect section 1370 of the general statutes, or of the said several days so far as they relate to the public schools, remains precisely the same as prior to such repeal." Carr, Attorney General.

KINDERGARTEN TEACHERS.

All kindergarten teachers except those who have been graduated from the State Normal School, are required to take the kindergarten examination.

NORMAL INSTITUTE CONDUCTORS' CERTIFICATES.

It shall be unlawful to pay any one from the institute fund for services as conductor or instructor of such institute, who does not hold a certificate or qualification for such work, issued by the state board of education upon the recommendation of the state board of examiners; Provided, That a member of the state normal school faculty shall be ex officio a conductor of normal institutes.

ORGANIZATION OF NEW DISTRICTS.

In the organization of a new district, it is legal to take cognizance of persons of school age residing within the limits of the proposed new district, whether the said persons are on the census list or not.

A county superintendent exercises his own discretion in the matter of organizing a new district, even though a petition may have been presented.

A two-thirds vote of the electors is necessary in order to organize a new district.

The matter of organizing new school districts is one mainly in the discretion of the county superintendent of schools, subject to the provisions of section 28 of the school law, providing that no city or town shall hereafter be divided into two or more districts, and the districts of the first class shall not be divided except upon a vote of the electors of the district, and that no district shall be divided for the purpose of forming a new district unless it contains more than nine square miles, nor unless the remaining portion of the district shall contain more than fifteen persons of school age.

REAL ESTATE.

Section 40 of the School Law makes school districts bodies corporate, with power to hold property and be a party to suits and contracts, the same as municipal corporations in this state.

Section 49 of the School Law is as follows:

"It shall be lawful for a school district in this state to take and hold under the provisions of chapter 31 of the Revised Statutes, so much real estate as may be necessary for the location and construction of a school house and convenient use of the

school, provided that the real estate so taken otherwise than by the consent of the owner thereof shall not exceed one acre."

This statute as quoted is evidently a misprint, and the words "Revised Statutes" appearing therein should read "General Laws." In the Session Laws of 1883 we find:

"An act to provide for condemning sites for public school buildings," which reads as follows:

"Section 1. It shall be lawful for any school district in this state to take and hold under the provisions of chapter 31 of the General Laws so much real estate as may be necessary for the location and construction of a school house and convenient use of the school, provided that the real estate so taken otherwise than by the consent of the owner thereof shall not exceed one acre."

Section 2 of the same act is an emergency clause. This law was approved February 13, 1883, and chapter 31 of the General Laws therein referred to is the one entitled "Eminent Domain" in the codification of 1877 and is still in force. This act provided a system whereby any person having the right to condemn lands may go into court and have the damages assessed. This law is now found in Mills' Annotated Statutes, commencing at section 1715, and under the provisions of said act the district would have the right to file its petition in the District Court for condemnation of the premises.

If the land now occupied by a school house added to the land the district seeks to purchase, would exceed one acre, the action would not lie, but if not exceeding an acre, including the ground already occupied, the court would enter an order providing for the appointment of commissioners or a jury to assess the damages, and the district could acquire title thereto. I know of no other way in which the district can acquire such title except by paying the price demanded by the owner. Carr, Attorney General.

A school house was built upon land held by a certain party as a homestead under the laws of the United States; there was an oral agreement between the homesteader and the school board that when his title was perfected, he would convey the grounds upon which the school house is situated to the school district. He has never done so, but has relinquished and sold his right to the homestead to another party, who now holds it as a homestead. What steps should be taken in order to secure title?

Section 4013, Mills' Annotated Statutes authorizes school boards to condemn not more than one acre of land for school

purposes under the act of eminent domain, which will be found in sections 1715 to 1734, Mills' Annotated Statutes. The compensation for the land would be determined under the same rules as if the homesteader were the owner in fee and not a homesteader. Carr, Attorney General.

RESIDENCE.

A person may retain his residence in a district, if, at the time of leaving the district, it was his intention to return.

The word "residing" as used in section 77 of the 1897 School Law, has reference to a permanent residence.

"That place shall be considered and held to be the residence of a person in which his habitation is fixed and to which, whenever he is absent, he has the intention of returning." Coy.

If a person is holding down a homestead claim in good faith, he must retain his residence in the school district in which said homestead is located.

"An unmarried person under twenty-one can claim residence where the parents reside, whether absent from home at school or at work." Peavey.

"Every unmarried person under twenty-one is entitled to draw school money." Peavey.

A person's residence is his voting place.

SCHOOL DIRECTORS.

If one member of a school board refuses to sign an order, there is no way of compelling him to do so except through regular legal procedure.

The board of directors determines the place or places where an election shall be held, and the secretary gives notice in accordance with such direction of the board.

"A retiring school board can not impose upon a succeeding board an obligation to retain a teacher for a longer period than the close of the current year." Coy.

The mayor of a town may also legally hold the office of school director, inasmuch as the duties of mayor and school director do not conflict.

A school board can not compel a teacher to make up time lost during the time a school was closed because of the preva-

lence of a contagious disease; Provided, Said teacher holds himself in readiness to teach subject to the order of the board.

A school board can not legally dismiss a teacher before the expiration of the time for which said teacher is engaged without good cause shown, and if so dismissed, said teacher can collect full salary; Provided, He holds himself in readiness to fulfill his part of the contract.

School directors of a district of the third class may purchase an organ for the use of the school, and pay for it out of the special fund.

The clause, "Absence from the district of any school officer, when prolonged beyond thirty days, may be held to work a vacancy in said office," is construed to mean being out of the district for more than thirty days.

The county superintendent may recognize a vacancy in the office of school director, if said director's absence from the district is prolonged beyond thirty days.

Children six years of age are entitled to school privileges, and it is the duty of the board of directors to provide adequate accommodations for them.

The board of directors of a district fixes the course of study for that district.

The board of directors has exclusive jurisdiction in determining the methods of discipline.

The board of directors has no right to deduct from a teacher's salary for legal holidays occurring during the school term.

A teacher may collect salary to the amount of actual damage suffered by the failure of the board of directors to fulfil its part of the contract.

If a teacher employed in the schools is incompetent to give instruction in any of the subjects provided in the course of study for that district, the board of directors would have cause for discharging such teacher.

The life of a first grade certificate is three years. Such certificate may be renewed by the county superintendent in the county in which it was originally issued, at the time, or immediately before, its expiration.

A school director has no right to cause his district to be in any way indebted to him unless such director happens to be secretary of the district, in which case he makes out a warrant to himself, and that warrant is signed by the treasurer. (An act to prevent frauds in the letting of public contracts.)

If an election of school directors is not held, the old board certainly does not hold over. The law provides that within ten days after election, notice should be posted of another election.

A school director appointed by the county superintendent to fill a vacancy, holds office only until the ensuing regular election.

At a regular meeting of a school board, two members of said board constituting a quorum can legally call a special meeting.

The secretary of a district has not a legal right to call a meeting of the voters in the district.

It is the duty of the treasurer to countersign all warrants drawn by the president and secretary on the county treasurer in favor of parties to whom the district has become lawfully indebted.

The president and treasurer of the school board can not legally remove the school from its quarters, unless authorized so to do by the board of directors in session assembled.

As to whether or not the president of the board has power to call a special meeting when he desires so to do, depends altogether upon the by-laws governing the board.

Two members of a school board in districts of the second and third classes can make a legal contract without the consent of the third member; Provided, Such contract is made at a regular meeting, or at a special meeting legally called, and of which all the directors had legal notice.

The directors of a district have no legal right to make a contract with a teacher to pay wages in excess of the revenues for the year.

Failure of a school director to file oath within the time required by law does not create a vacancy in the office; Provided, Said oath has been taken before the proper officer within the required time.

If the electors of a district are dissatisfied with the action of the board, they have the privilege of enjoining the board from fulfilling said action.

A county superintendent has no power to remove a school director.

The board of directors of a district can not legally transfer the funds of that district to another district.

The board of county commissioners has no authority to change a special tax levy certified by the board of directors.

The law makes no provision whereby the board of directors of a district can appropriate school money to pay tuition for the pupils of said district who attend school in another district.

The board of directors has exclusive jurisdiction in the employing and discharging of teachers.

The Constitution of this state provides for the establishment of school districts of convenient size, in each of which shall be established a board of education to consist of three or more directors, to be elected by the qualified electors of the said districts. "Said directors shall have control of instruction in the public schools of their respective districts," Constitution, article X., section 15.

The school laws shall contain the following provision:

"Any school board shall have power to make such by-laws for their own government and for the government of the public schools in their charge, as they may deem expedient, not inconsistent with the provisions of this act or the instructions of the superintendent of public instruction." School Law, section 48.

Under this law it has been held in numberless cases that the school board are vested with quasi judicial discretion in the matter of making by-laws, rules, and regulations, and the only power the courts have to control them in the premises is to correct any abuse of such discretion. Under this provision it has been held by the supreme court of Iowa that:

"Any rule of a school not subversive to the rights of children or parents and not in conflict with humanity and the precepts of divine law, which tends to advance the objects of the law for establishing public schools, must be considered reasonable and proper." *Burdick vs. Babcock*, 31 Iowa, 565.

And it has been held in numerous other instances that the school directors have power to make rules regulating prompt attendance, diligence in study, and proper deportment within and without the schools, and such rules must be reasonable. *Ruleson vs. Post*, 79 Ill., 567; *Ward vs. Wood*, 48 Cal., 36.

And the same doctrine has been held in California, Indiana, Massachusetts, Maine, Michigan, Missouri, Nebraska, Ohio, and Vermont.

It has also been decided that, "In the absence of rules established by the school directors, it is the right of the teacher to make all necessary and proper rules for the conduct and order of the school, and it is his duty to see that order is maintained and the rules observed."

And that in order to enforce any reasonable regulation or rule so established, either by teacher or board of directors, the teacher may resort to moderate and reasonable chastisement, or the rules may be enforced by suspension or expulsion, as may be determined by the board of directors.

These rules may extend to and control the conduct of children on their way from their homes to the school house, and on their return from the school house to their home, and it has even been held that for any act done, even in the presence of the parents, on the way from the school, which is subversive to the efficiency of the school, the teacher may inflict corporal punishment upon the return of the pupil to the school. *Lander vs. Seaver*, 32 Vt. 114.

This case carries the doctrine, in my judgment, to the extreme limit, and I would hesitate to announce the rule in this state, but the rule laid down by the Massachusetts supreme court in *Sherman vs. Charlestown*, *supra*, is undoubtedly correct. In that case of a girl twenty years of age brought suit to recover damages on account of expulsion from the public schools. The answer alleged that the plaintiff was of immoral character and unchaste and vicious habits. It was argued that if a young person, male or female, sustains a bad moral character and is guilty of gross acts of notorious misconduct, provided there is no violation of the rules of the school and no misconduct in the school, such pupil can not be rightfully excluded for that cause. In passing upon the question the court said:

"The court is thoroughly satisfied that on proof of the facts tendered by the defense, the school committee were justified in excluding plaintiff, and that such exclusion was not wrong."

In *Davin vs. Gose*, 85 Mo., 485, a teacher had established a rule against the use of profane language, quarreling, or fighting among the scholars, either at the school house or on the way home. One of the pupils violated the rule on the way home from school, and the teacher punished him by whipping him with a switch. Action was brought to recover damages, and in determining the case the court said:

"While it is provided in section 7045, Revised Statutes, 'the board shall have power to make all necessary rules and regulations for the government of schools in their district,' if they fail to do so, the right of the teacher employed to teach the school to adopt reasonable rules to promote good order and discipline rises out of the very nature of his employment, and the only question worthy of consideration which this record presents is, was the rule which forbade the use of profane language, quarreling or fighting, either at school or on their way home, reasonable and promotive of good order and the proper discipline of the school?"

"It must be conceded that the rule, in so far as it forbade such acts on the part of the scholars while at school, was not only reasonable but necessary to the orderly conduct of the school;

but it may be insisted, and doubtless was urged before the trial court, that so soon as the scholars were dismissed from the school by the teacher his authority over them ceased and that of the parents resumed, and that, therefore, that portion of the rule which forbade such acts as are herein mentioned, while the scholars are on their way to their homes, is without sanction or authority. We are unwilling to go to this extent, believing it to be unsupported either by reason or weight or authority. * * * If the effect of acts done out of the school room, while the pupils are returning to their homes and before parental control is resumed, reach within the school room and are detrimental to the good order and best interests of the school, no reason is presented why such acts may not be forbidden and punishment inflicted on those who commit them." Citing *Burdick vs. Babcock*, 31 Iowa, 562; *Sherman vs. Charlestown*, 8 Cushing, 160.

In each of the cases cited the same doctrine is maintained.

Dritt vs. Snodgrass, 66 Mo., 286, is an interesting case upon the subject, and carries the doctrine of the power of school directors to make rules to the utmost limits. In that case the board of directors and teacher had made a rule prohibiting the scholars from attending evening parties during the continuance of the school. A pupil, who was a young man seventeen years of age, with the consent of his parents, attended an evening party, and for violation of the rule of the school was expelled by the board of directors. Action was brought to recover damages.

In passing upon the case, the court expressly declined to decide upon the question of the reasonableness of the rule, and speaking upon that question the court said:

"School directors are elected by the people, receive no compensation for their services, are not always, or frequently, men who are thoroughly informed as to the best modes of conducting schools. They are authorized, and it is their duty, to adopt reasonable rules for the government and management of the school, and it would deter responsible and suitable men from accepting the position if held responsible for damages to pupils expelled under the rules adopted by them under the impression that the welfare of the school demanded it, if the court should deem it improper. They are to determine what rules are reasonable, and who shall say that the rule adopted in this case was harsh or oppressive? I might think it was; wiser men might maintain that it was proper and right—that pupils attending social parties are liable to have their minds drawn off from their studies and thus to retard their progress, and whether the rule was a wise one or not, the directors and teacher were not liable to any ac-

tion for damages for enforcing, even to the expulsion of the pupil who violates it."

In *Bolding vs. State*, 23 Tex. App., 135, the court of criminal appeals of that state uses the following language:

"Teachers have the right, the same as boards, to prescribe reasonable rules for the government of the school under their charge and to enforce, by moderate restraint and correction, obedience to such rules. This authority of the teacher over the pupils is not, in our opinion, necessarily limited to the time when the pupils are at the school room or under the actual control of the teacher. Such authority, we think, extends to the prescribing and enforcement of reasonable rules and regulations, even while the pupils are at their homes."

In *Hutton vs. State*, 23 Tex. App., the same court sustained the act of the teacher under the following circumstances:

Defendant was a school teacher conducting a school; the boy fought with other boys, but the fighting occurred away from the school house, and not during school hours. Among other rules of the school was one prohibiting the students from fighting. When it came to the knowledge of the teacher that this pupil and others had been engaged in fighting, he punished all so engaged for violation of the rule, by whipping them.

In passing upon the question, the court said:

"Our law wisely provides that the exercise of moderate restraint or correction, by teacher over a scholar, is legal. It is shown by the evidence that the correction administered by the teacher to the pupil in this instance was moderate. It was merely an ordinary whipping with a small switch, such as many parents inflict upon their refractory boys, and such as should perhaps be more common among parents and teachers. That the punishment so inflicted for the infraction of a rule of the school, which infraction was committed away from the school house and not during the school hours, did not deprive the teacher of the legal right to punish the pupil for such infraction."

So far as my investigation goes I have found no case which denies the right of the board of directors and the teacher to make reasonable and necessary rules for the government of the schools or which confines the operation of these rules to the school house or the school grounds. On the other hands, every case in which the question has been raised sustains the doctrine that any reasonable rule for the government of the conduct of the children attending the schools, not only during the time they are in the school room, but while away from it, and on their way to and from school, will be sustained by the courts.

In the light of these decisions I have no hesitation whatever in advising you that under the constitution and laws of this state the board of directors of any district have power to establish reasonable rules and regulations for the government of the schools under their charge, for controlling the conduct of teachers and pupils, not only while in the school room, but while going to and from the school, and that such reasonable rules and regulations may be enforced by suspension, expulsion, or corporal punishment, as the board of directors may determine.

That in the absence of any rules and regulations prescribed for the government of the schools by the board of directors, it is within the power of the teacher to make such reasonable rules and regulations, and to enforce them in the same manner, subject always to the supervision of the directors. Carr, Attorney General.

SCHOOL HOUSES.

The power to fix the site for school houses necessarily includes the power to fix the location of the school, and after a majority of the voters of the district (third class) have decided to have the site of the school house in a certain portion of the district, it would hardly be held as within the power of the board to defeat the will of the electors by establishing a school in some other place.

The electors of a district are the only persons who have power to levy tax for the purpose of building school houses.

SPECIAL MEETINGS.

The notice calling a special meeting is legal, even though the date has been omitted; Provided, That said notice has been posted the required number of days, and the special meeting was called at a regular meeting of the school board at which a quorum was present.

A meeting of the board of directors of a district must be held for the purpose of calling a special meeting of the voters of said district.

TAXES.

Section 4033 of Mills' Annotated Statutes provides:

"It shall not be lawful for the officers of any district to issue warrants at any time, in any amount in excess of the tax levy for the current year."

If this statute were to be construed strictly, it would prevent the school board from drawing a large part of its school fund. The tax levy in a district does not, in many cases, provide for more than half the revenue of the district. It is manifest that the words "tax levy," as used in the statute, must be construed to mean "the revenues of the district," including the county fund, the state fund, and the fees derived from fines and penalties. If warrants are drawn in excess of such revenues, the warrants themselves would probably be void, but it does not follow that the indebtedness itself would be cancelled.

The statutes provide for ample means whereby the school districts are enabled to pay their expenses. School districts are not bound by the iron-clad limitations applicable to towns, counties, and state, it being the purpose, evidently, of the Constitution and of the laws, to provide liberal means for the support of common schools and a liberal education of the youth of the state.

If, under these circumstances, a school district, on account of some unforeseen casualty or expense, or for some unexpected failure of revenue, should incur an expense in excess of its revenue, it would be its duty to levy a sufficient amount of tax the following year to pay such indebtedness, in addition to its expense for said year.

No warrants can be issued in excess of the revenue, but a certificate of indebtedness should be issued, payable out of the revenue of the succeeding year, and it would be the duty of the board during the succeeding year to draw a warrant for its payment.

In districts of the first and second class, the school board can levy the taxes for the special fund. In districts of the third class, the power to levy taxes lies exclusively with the electors.

"In my opinion, a tax levy by the school directors is limited to fifteen mills which does not include the levy by the county commissioners. Such fifteen mill levy, however, must cover all expenses authorized by section 51 of the School Law, which includes building." Carr, March 2, 1897.

"1. The directors of a school district have a legal right to certify a special tax to the county commissioners without a vote of the electors. In districts of the third class, such tax must not exceed fifteen mills on the dollar. If a vote of the electors has been taken in the district, then the directors should certify the amount voted.

"2. In a third class district, the tax levy has to be submitted to the voters. Twenty days' notice of such meeting must be given. The county commissioners must make a levy that will be enough for four months of school at the rate of \$40 per month; they can levy more, but not less." Peavey.

TEACHERS.

A teacher can draw her wages during the time that a school is closed on account of an epidemic.

A contract between a teacher and his substitute is not binding upon the board of directors.

TIE VOTE.

At a school election, in case of a tie vote, it is the intent of the school law to provide that notice of another election shall be posted within ten days.

VACCINATION.

"Can children who are not vaccinated be excluded from school? If so, by what authority? Is the authority of the state board of health absolute in the matter?"

The authority of the health officers in the premises is found in the following statute:

"Any board of health of any town, city or county, may make suitable provision at any meeting for the inoculation of the inhabitants with cow pox under the direction of the local board of health or health officer." Mills' Annotated Statutes, section 3594.

This statute has been in force ever since the state has had an organized existence. Whether it was in force under the territorial laws or not, I have not taken the trouble to investigate. It is an enactment under the police powers of the state, and so far as I know, its validity has never been questioned. In the light of history, it would seem to be too late to raise the question of the advisability of its enforcement.

Section 48 on page 38 of the Compiled School Laws, contains the following provision:

"Any school board shall have power to make such by-laws for their own government and for the government of the public schools under their charge, as they may deem expedient, not inconsistent with the provisions of this act, or the instructions of the superintendent of public instruction."

There would seem to be no question whatever that under this statute the school board would have the power to make any by-laws tending to promote the morals and health of the pupil as well as those tending to promote intellectual development. A by-law providing that any pupil infected with small pox, scarlet fever, diphtheria or any other contagious disease, should be excluded from the school, would certainly come within the powers of the board under this statute; and as prevention is conceded to be better than cure, I can see no reason why a by-law providing that a well-recognized preventive must be resorted to under pain of exclusion from school, would not be equally within the powers of the school board, particularly in cases where the board of health shall have made an order and "suitable provision" under the statute first cited. Carr, Attorney General.

YEAR.

The current year is identical with the fiscal year.

The current year begins December 1 and closes November 30.

Examination Questions

COUNTY

Regulations Governing County Examination of Teachers.

Directions to Applicants for Teachers' Certificates.

Questions for the County Examinations of Teachers, 1896-7
and 1898.

STATE

Statement of Candidates for State Examination.

Questions for the Examination of Applicants for State
Diplomas, 1897-1898.

KINDERGARTEN WORK

Kindergarten Law.

State Kindergarten Examination Questions, 1897.

County Superintendents of Schools, 1896-1898 ; 1898-1900.

REGULATIONS GOVERNING COUNTY EXAMINATION OF TEACHERS.

To County Superintendents:

The following regulations in reference to county examinations for teachers' certificates, are hereby prescribed:

1. The questions to be used in these examinations will be forwarded to county superintendents, and to deputies appointed by them, in sealed envelopes. These must be opened first in the presence of the applicants, at the time set for the examination. For the protection of the superintendents themselves, this rule shall be strictly enforced, and the attention of the applicants directed to the envelopes.

2. County superintendents shall give due notice of the place of examinations, and the hour at which they will begin.

3. Applicants shall be instructed to supply themselves with pencil, or pen and ink. Paper of uniform size will be furnished by the county superintendents.

4. Applicants shall write on one side of each sheet of paper.

5. Names of applicants shall not be taken. At the beginning of the examination each applicant shall be given an envelope with a number, by which he will be known during the examination.

6. All answer-papers shall be examined and graded by number before the envelopes which contain the names of the applicants are opened.

7. Applicants shall not be allowed to take any part of the examination excepting at the time designated.

8. Answer-papers of applicants that have been examined in any other county shall be accepted only when forwarded by the superintendent of that county.

9. Applicants shall not be allowed to leave the room until their work has been completed and handed to the examiner.

10. A written certificate, or a statement with references of good character, shall be required of each applicant; also one of

past success in teaching. Applicants under eighteen years of age shall not receive a certificate. Applicants who make use of books or memoranda during examination shall not receive a certificate.

11. The answer-papers, arranged and filed in good order, must be collected at the expiration of each session.

12. (a) In grading, allow the same credits for each question, unless a number is given in parenthesis at the left of the question. (b) Issue certificates upon the following conditions: First Grade—An average of 90 per cent.; no branch below 70 per cent. Second Grade—An average of 80 per cent.; no branch below 60 per cent. Third Grade—An average of 70 per cent.; no branch below 50 per cent. "Not more than two certificates of the third grade shall be issued to the same person."

13. The standing attained by applicants shall be written in ink upon all answer-papers. Papers shall be indorsed in ink by the county superintendent, who shall place them on file in his office for at least six months.

14. Practical experience in teaching shall be considered in issuing a certificate of any grade.

15. Applicants for certificates of the first grade shall have taught successfully for at least one year.

16. The county superintendents must render their reports to the superintendent of public instruction as soon as possible. Blanks will be furnished for the purpose, on which shall be placed the names of all applicants.

17. In addition to the regular certificate blanks, statement of standing blanks will be forwarded to county superintendents, in order that all applicants may receive their standing.

18. Private examinations shall not be lawful.

19. A quarterly examination report shall be rendered by each county superintendent.

20. If, for attending state normal institute, 5 per cent. is added, it must be estimated on the average attained, and not on 100 per cent. as a basis.

GRACE ESPY PATTON,
Superintendent of Public Instruction.

DIRECTIONS TO APPLICANTS FOR TEACHERS' CERTIFICATES.

1. At the head of every sheet of paper used at this examination, write your number and the subject.

2. Use a separate sheet of paper for each subject; that is, do not write two subjects on the same sheet.

3. Do not fold the papers.

4. Number your answers to correspond with the questions, but do not repeat the questions.

5. Read each question carefully, that you may answer understandingly.

6. Give complete solutions of arithmetical problems; mere answers will not be accepted.

7. Ask no questions. Any doubt as to the meaning of a question may be submitted in writing, and will be considered when your papers are examined.

8. Collusion between applicants, or any other act of dishonesty, will make worthless the examination.

9. In estimating your standing, the general appearance of the papers, as well as the correctness of the work, will be considered.

10. Morning sessions, 9 o'clock to 12. Afternoon sessions, 1:15 to 4:15.

OFFICE OF COUNTY SUPERINTENDENT.

.....County, Colorado.

No.....

You will be known during the examination, not by your name, but by the number on your envelope.

Answer the following questions and seal them, together with your written certificates of character and of success in teaching, in the envelope.

Name in full.....
P. O. address.....
Age..... Born in the state of.....
How long have you taught school?calendar months
In how many different districts of Colorado have you taught?....
In what other states have you taught?.....
In what schools were you educated?.....
.....
Give the date and grade of your last certificate.....
By whom was it issued?.....
How many teachers' examinations have you taken?.....
.....
What educational papers do you read regularly?.....
.....
Do you read the daily papers?.....
What normal institutes or teachers' associations have you attended in this, or any other state, during the past year?.....
.....
.....

QUESTIONS FOR THE COUNTY EXAMINATION OF TEACHERS, DECEMBER 18 AND 19, 1896.

FIRST DAY, A. M.

Physiology. (45 minutes.)—

1. Locate the thoracic cavity; mention its contents.
2. Name the principal functions of the skin.
3. What sac envelopes the heart and how is the sac lined?
4. a. What is meant by nitrogenous foods?
4. b. Name the three articles of food and state what nitrogenous substances they contain.
5. What causes the pulse?
6. Explain why it is so difficult to see when you go out of the sunlight into a dark room.
- 7-8. Where is the diaphragm, the humerus, the ciliary muscle, the cerebrum, the pancreas?
9. Describe the liver and its functions.
10. State the subject matters of the sciences of human anatomy, physiology, and hygiene.

Orthography. (30 minutes.)—

1. Place the diacritical marks on the following: Tonsilitis, apparatus, opponent, culinary, apricot.
2. Write the synonym of begin, alike, equal, inside, round.
3. Write the names of the counties in Colorado which begin with S.
4. Write the name of a mountain and river which begin with U.
5. Spell the full name of the four presidents (in order) elected after the close of the Mexican war.

History. (60 minutes.)—

1. In what order would the members of the president's cabinet succeed to the office of president if both president and vice-president should die?

2. Write upon the Salem witchcraft.
 3. What were the "Biglow Papers?" Explain "carpet-bag government," squatter sovereignty.
 4. Tell of the taking of Louisburg and its relations.
 5. How was Cornwallis captured?
 6. What has recently brought into prominence Armenia, Cuba, Utah, Cripple Creek?
 7. Give an account of Sir Walter Raleigh and his services to America.
 8. How did Texas become a part of U. S.?
 9. Tell of the Mason and Slidell incident.
 10. Name three prominent American historians and the most important work of each.
-

FIRST DAY, P. M.

Grammar. (60 minutes.)—

1. What is a personal pronoun? Write sentence containing one and parse.
2. Write the possessive singular and plural of man, James, horse, genius.
3. Inflect rare, bad, well.
4. Name four adjectives that cannot be compared.
5. Define active and passive voice. Write a sentence in active, change to passive voice.
6. Analyze "The dust we trample heedlessly throbbed once in saints and heroes rare."
7. Parse trample.
8. Parse heedlessly.
9. Parse once.
10. Define impersonal verbs. Give example.

School Law—

Being unable to procure and furnish any school laws to superintendents and teachers, examination upon that subject will be omitted and averages based upon topics given. A. J. PEAVEY.

Theory and Practice. (60 minutes.)—

1. What is meant by "the discipline of consequences?"
2. What is the true office of mathematical training?
3. What is the duty of the teacher in relation to the care of school houses, outbuildings, grounds, apparatus, and libraries?
4. What can you tell of the "Committee of Ten?" "The Committee of Fifteen?"

5. What is the main purpose of language work during the child's first year in school?
6. What forms of punishment do you consider the best?
7. Distinguish between objective teaching and illustrative teaching.
8. What ends should be subserved by written examinations?
9. What are the chief arguments for or against prizes as incentives?
10. State the advantages and disadvantages of oral spelling.

SECOND DAY, A. M.

Arithmetic. (90 minutes.)—

1. If the distance between Denver and Littleton is 11.5 miles and this is $6\frac{1}{4}\%$ of the whole distance between Pueblo and Denver, how far is it to Pueblo?
2. Define check, interest, commission, insurance.
3. Sent my agent \$1,508.80 to invest in flour at \$5.75 a barrel after deducting his commission at $2\frac{1}{2}\%$ per cent. How many barrels can he buy?
4. A square tank 3 feet deep is to hold 1,000 gallons. Find its other dimensions.
5. What number is that which being increased by $\frac{3}{4}$ of itself and then doubled, gives 4 more than the square root of 2,704?
6. Bought a house and lot for \$6,000. For what must I rent it to gain 6 per cent. on my money, and to pay \$25 for repairs, \$22.50 for insurance and taxes at $1\frac{1}{4}\%$ per cent. on $\frac{3}{4}$ of the value.
7. What is the length of a rope extending from the top of a pole 40 feet high to the top of a stake 13 feet high standing 35 feet from the pole?
8. What is a multiple? Illustrate.
9. Define mensuration, hypotenuse, compound interest, volume used arithmetically.
10. A agreed to labor for \$2.50 per day on condition that he should forfeit 50 cents every day he was idle. At the end of 100 days he received \$190. How many days was he idle?

Reading. (45 minutes.)—

1. What processes are used by good teachers in primary reading classes?
2. State the chief difficulties in teaching primary reading in English.

3. Name a noted selection from each of the following authors: Lowell, Whittier, Longfellow, Tennyson.

4. What is rhyme? Give example.

5. Write and define four words in which *flect* enters as a part.

6. Define stanza, verse, synonym, consonant, aspirate.

7. Syllabify simultaneous, hymenial, sinecure, precedence, peremptory.

8. What are the tests of a good reading book?

9-10. Tell how you teach reading.

Penmanship. (45 minutes.)—

1. Write your name.

2. Write the capital letters.

3. Write the small letters.

4. Copy: Let us do our work well.

Both the unseen and the seen,

Make the house, where gods may dwell,

Beautiful, entire, and clean.

5-6. Tell your opinion of vertical writing.

7. In what grade do you think a child should begin to use pen and ink? Why?

8. Do you think the use of pencil before pen is beneficial? Why?

9. Describe position at desk for writing.

10. Describe position of pen in hand.

SECOND DAY, P. M.

Civil Government. (60 minutes.)—

1. Tell how United States senators are elected.

2. Give in detail the proceedings of the presidential electors.

3. How may the state constitution be amended?

4. What classes of cases are tried in United States courts?

5. What are the qualifications of voters?

6. Define veto, tariff, protection, treason.

7. Discuss the pardoning power of the governor.

8. What powers are denied absolutely to the separate states by the United States constitution?

9. Explain the main features of the banking system.

10. State President Cleveland's argument for the retirement of the greenbacks.

Science. (45 minutes.)—

1. Name five plants natives of Colorado that are of economic value.
2. Of what is water composed?
3. What is spermaceti, ambergris, ivory, musk, pearl?
4. What is a spectrum?
5. Explain the formation of snow and hail.
6. Explain the formation of coal.
7. Explain the construction of the thermometer.
8. What is sponge?
- 9 and 10. State the principal points of difference between eclipses of the sun and moon.

Geography. (45 minutes.)—

1. Where is the geographical center of the United States?
2. What is a tornado? What is a cyclone?
3. Name five important ports on the great lakes and state to what their importance is due.
4. Discuss the physical features and industries of Colorado.
5. Contrast New York, New Orleans and San Francisco as to their commerce.
6. Name three great canals in the United States.
7. Describe a voyage from Chicago to New York.
- 8 and 9. What and where are the following: Havana, Coralline, La Plata, Nova Zembla, Shasta, Jamaica, Calcutta, Sumatra, Suez, Hecla?
10. Write ten lines or more about Venezuela.

QUESTIONS FOR THE COUNTY EXAMINATION OF
TEACHERS, MARCH 19 AND 20, 1897.

FIRST DAY, A. M.

Arithmetic—

1. Give rule for finding the lateral surface of a pyramid or cone. Illustrate by a problem.

2. What subsidiary coins are used in Canada, and what gold pieces are in circulation?

3. A druggist purchased $9\frac{3}{4}$ ounces of quinine at 40 cents an ounce, Avoirdupois, and sold it at 60 cents an ounce, Troy. How much was his profit?

4. A mortgage of \$9,650, dated May 1, 1875, bearing interest at 5%, was endorsed as follows: January 1, 1876, \$300; June 1, 1876, \$800; February 1, 1877, \$1,250; July 25, 1878, \$2,250; September 22, 1880, \$2,000. What was due January 1, 1881?

5. Pekin, in China, is $116^{\circ} 27' 30''$ east longitude, and Washington is 77° west longitude. When it is midnight, December 31, in Washington, what time will it be in Pekin?

6. A cistern that holds 280 gallons is empty. It has a supply pipe that will fill it in 10 hours, and a discharge pipe that will empty it in 7 hours. If, after the supply pipe has been open 4 hours, the discharge pipe is opened, in what time will the cistern be emptied?

7. If a haystack 13 feet in diameter contains 17 tons, what is the diameter of a similar stack which contains 136 tons?

8. Work by proportion the following problem: If it costs \$35 to carry 1,875 pounds of freight 160 miles, how much should be paid for carrying 2,500 pounds 250 miles?

9. Find the greatest common divisor of 3,672 and 7,992.

10. What is the difference between figures and numbers? What is a complex decimal? What is a perfect power? What is the difference between an arithmetical and geometrical progression? What is a scalene triangle?

Writing—

1. In regard to position, holding the pen and using the forearm, what directions should you give to pupils?

2. How should you teach the vertical system of writing?

3. What are the advantages of the vertical system?

4. What do you consider the essentials of good handwriting?

Name them in the order of their importance.

5-10. Write the following:

"How beautiful is youth! how bright it gleams

With its illusions, aspirations, dreams!

Book of Beginnings, Story without End,

Each maid a heroine, and each man a friend!"

Orthography—

1. What are diaeretical marks, and for what purpose are they used?

2. Give words containing the broad a, the long e, the short o, and the i with a wave.

3. Give five prefixes and five suffixes.

4. What are the fundamental requisites of good pronunciation?

5. What objections may be made to the placing of purposely misspelled words before pupils?

6-10. The spelling, as shown in all the papers of this examination, will count one-half in the marking of orthography.

FIRST DAY, P. M.

United States History—

1. What were the compromises of the Constitution?

2. Name the first political parties in the United States. What were the characteristics of each? Who were the leaders of each?

3. What states were formed from the Northwest Territory?

4. What was the Missouri compromise?

5. What was the origin of the Mexican war?

6. Why was the thirteenth amendment to the Constitution necessary?

7. What were the issues of the last presidential campaign?

8. In the conflict now in progress between Spain and Cuba, what is the attitude of the United States?

9. Give the origin of the Leadville strike. How does the strike affect Colorado.

10. Outline the government of a city. What arguments are advanced in favor of home rule for the city of Denver?

Reading—

1. Outline your method of teaching beginners.
2. Name five objects to be sought in the teaching of reading.
3. Give the names of five contemporary writers whose books are substantial contributions to literature.
4. What is the difference between prose and poetry.
5. What do you know about voice placing and the philosophy of expression?

Physiology and Hygiene—

1. Name the organs of digestion and respiration.
 2. Describe the circulation of the blood.
 3. What are the functions of the kidneys?
 4. Distinguish between voluntary and involuntary muscles, and illustrate each.
 5. Name the bones of the leg and foot.
 6. Describe the structure of the brain.
 7. What is the effect of altitude upon the nervous system?
 8. What laws of health should be taught children?
 9. Why is exercise necessary to the preservation of health?
 10. What is the best method of ventilating a school room?
- What is the effect of foul air upon the system?

SECOND DAY, A. M.

Grammar—

- 1-5. "I sing to him that rests below,
 And, since the grasses round me wave,
 I take the grasses of the grave,
 And make them pipes whereon to blow.
 The traveler hears me now and then,
 And sometimes harshly will he speak:
 'This fellow would make weakness weak,
 And melt the waxen hearts of men.'"

Classify the subordinate elements in the foregoing sentences, and tell what each modifies.

6. How are sentences classified according to form?
7. What is voice? What class of verbs is always active voice?

8. What is the subjunctive mood? What is its place in literature at the present time?

9. Distinguish between the use of shall and will; would and should.

10. In parsing verbs, what points should be given?

School Law—

1. What are the requirements of the compulsory education law?

2. Who are the members of the board of education? What are the duties of the school board? How are school districts classified? When does the school year begin?

3. When was the free kindergarten law passed? What are its provisions?

4. Give the substance of the act authorizing school directors to purchase and display United States flags upon school buildings.

5. How does the law provide for the inculcation of temperance principles? How long has Arbor day been observed in Colorado?

Geography—

1. What river forms the boundary line between the United States and Mexico?

2. Name the principal minerals found in Colorado. Compare the agricultural and mineral wealth of the state.

3. Define delta, isthmus, mesa, park, cañon, gulch, oasis, fiord.

4. How many states in the Union? What territories have not yet been admitted.

5. Name the principal rivers emptying into the Gulf of Mexico.

6. What city is the seat of the Turkish government? Who is the present sultan? What is meant by the Sublime Porte? Who are the Armenians?

7. How large is Cuba? What is the population?

8. Where are the Philippine islands? To what country do they belong?

9. Name and describe the largest inland sea.

10. What form of government exists in the Hawaiian islands?

SECOND DAY, P. M.

Theory and Practice—

1. What relation does the subject of psychology bear to education?
2. What is the psychological method? Do you make daily application of this method? If so, in what way?
3. What ethical instruction should be given in the grades?
4. Outline two methods of forming a school library.
5. What are the advantages of the object method of teaching?
6. Give arguments for and against manual training in the public schools.
7. How should literature be taught in the grades?
8. Outline a recitation in English grammar, and give an accepted method of presenting the subject.
9. In what relation should the kindergarten stand to the grades?
10. Is teaching a profession? Why?

Civil Government—

1. Why was the Constitution of the United States established?
2. When, and by what formality, are United States senators elected?
3. How many methods of electing a president does the Constitution provide? What are they?
4. Of what do the resources of the government consist?
5. How many ways of becoming a citizen of the United States are there?
6. Through how many processes may a bill become a law?
7. What is the present ratio of representation in the house?
8. What are the duties of the state board of equalization?
9. How are the public schools of the state supported?
10. What provision does the Constitution of Colorado make concerning the school fund?

Natural Sciences—

1. Define momentum, energy, impenetrability, center of gravity, horse power.
2. What is meant by specific gravity? How is the specific gravity of a solid found?

3. Why is the destruction of the forests a menace to the agricultural interests of the country?

4. What is meant by evolution? What is latent heat?

5. Explain the principle by which a barometer indicates the height of a mountain. What recent discovery in physics has commanded universal attention among scientists?

**QUESTIONS FOR THE COUNTY EXAMINATION OF
TEACHERS, AUGUST 20 AND 21, 1897.**

FIRST DAY, A. M.

United States History—

1. What was the attitude of Georgia in the revolutionary movement.
2. What was the declaration of rights? When was it adopted?
3. How was the antagonism between Thomas Jefferson and Aaron Burr engendered?
4. What was Alexander Hamilton's financial policy?
5. What nation contested with the French for the territory about the mouth of the Mississippi river? By what treaty did France relinquish her claim to the entire Mississippi valley?
6. Name a president elected from the New England states. How many presidents has Ohio given to the United States?
7. What was the origin of written constitutions?
8. What is the process by which a territory becomes a state?
9. When did Colorado become a state? Who was the first governor of the state of Colorado?
10. Who was president of the United States when Victoria ascended the throne of England, and what were the principal events of the administration?

School Law—

1. When was the State Normal School established?
2. What provisions are made for the education of the deaf and blind?
3. What is the legal definition of "a public school"?
4. What is meant by "the school year"?
5. What is a "school census"?

6. In what ways may a school district forfeit its portion of the school fund for the year?

7. When and where are school elections held?

8. When does the superintendent of public instruction apportion the school fund?

9. What is the "normal institute fund"?

10. What reports does the law require teachers to make?

Reading—

1. State four requirements of good articulation. Tell something about your method of teaching gesture work.

2. Why is the teaching of intelligent reading in the lower grades most important to the subsequent progress of a pupil?

3. In the third grade, what faculties of the child's mind would you expect to develop through the proper use of the reading lesson?

4. To what extent would you recommend supplementary reading to your pupils?

5. Tell how you would teach the following sentence by thought analysis:

So through the night rode Paul Revere,

And so through the night went his cry of alarm,

Through every Middlesex village and farm,

A cry of defiance, and not of fear,

A voice in the darkness, a knock at the door,

And a word that shall echo for evermore!

FIRST DAY, P. M.

Grammar—

1. Analyze the following:

"The man whom heaven appoints

To govern others, should himself first learn

To bend his passion to the sway of reason."

2. Give the rules for the formation of the possessive case, singular and plural forms, and illustrate each rule.

3. Why should English Grammar be taught?

4. Write a business letter ordering school supplies.

5. Write:

(a) A quotation within a quotation.

(b) A quoted question.

6. Give the rules for the use of the colon.

7. Give the past, future and present-perfect tenses, indicative, active, and the future indicative passive of learn and teach.

8. Write sentences illustrating three different uses of the infinitive.

9. State the distinction between complex and compound sentences. Illustrate.

10. Write a sentence in which a subordinate clause is used as a noun; as an adverb; as an adjective.

Theory and Practice—

1. Point out the arguments for and against art in the public schools.

2. What relation should exist between the teachers' reading circle and the teacher?

3. Give the arguments for and against the state furnishing free text books to all the pupils in the public schools.

4. Outline a recitation in fractions for fifth grade pupils.

5. State the advantages of a normal school training.

6. What is the function of the normal institute.

7. What is the principle upon which the kindergarten is founded?

8. Outline the Herbartian philosophy.

9. What are the defects of the present system of common school education?

10. Should pedagogics be taught in the high school? Why?

Civil Government—

1. What is a state? What are its civil divisions?

2. Define the following words: Electors, inhabitants, residents, citizens. Which word designates the sovereign people of the United States?

3. Name the revenues of the federal government.

4. Name the expenses of the federal government.

5. What are government bonds? Explain the national banking system.

6. Define communism, socialism, nihilism.

7. Explain in detail the method of voting by the Australian ballot.

8. Give the history and functions of the bureau of education.

9. What is the origin of school lands?

10. Make a list of all institutions supported by the state.

SECOND DAY, A. M.

Arithmetic—

1. If 3 be added to both terms of the fraction $\frac{7}{8}$, will the value of the fraction be increased or diminished? How would you explain this example to a class?

2. A village lot 60 by 150 feet was sold for \$500. At what price an acre was the land sold?

3. Find the square root of $\frac{324}{841}$. Find the dimension of a cube which shall contain as much as a common brick measuring 8x4x2 inches.

4. What must be the face of a note due 45 days hence which, when discounted at $4\frac{1}{2}$ per cent., will yield \$600.

5. A difference of $35^{\circ} 17'$ in longitude makes what difference in time?

6. If $\frac{5}{18}$ of the price received for an article is lost, what is the loss per cent.

7. What is a check? A promissory note? A sight draft? Deline foreign and domestic exchange.

8. The dial face of a clock contains 21.65 square inches. What is the length of the minute hand if it reaches within $\frac{1}{4}$ of an inch of the bounding circle of the dial?

9. The roof of a building in Denver is one mile above sea level. What is the exact altitude expressed in feet?

10. The sides of an equilateral triangle are respectively 18 feet each. Find the altitude of the triangle.

Physiology—

1. Describe the process of digestion.

2. On what class of foods does the nutrition of the brain most largely depend?

3. What are the functions of the skin?

4. Why is the care of the teeth an important factor in preserving the health.

5. Describe the effect of narcotics and stimulants.

6. Which is the longest bone in the human body?

7. What kind of exercise do you consider most healthful? Why is an erect carriage conducive to symmetrical physical development?

8. What organs are located in the thorax?

9. Name the three coverings of the brain.

10. How would you treat a severe burn? What would you do if a pupil cut an artery?

Writing—

1. What is the first requisite of good penmanship?
2. How do you teach pupils to acquire a free movement?
Do you believe in allowing individuality in writing?
3. In teaching a vertical hand, what two fundamental principles must be observed?
4. What advantages are claimed by persistent advocates of the slant system?
- 5-10. Write the following:
Through the torrents from their fountains
Roar down many a craggy steep,
Yet they find among the mountains
Resting-places calm and deep.

SECOND DAY, P. M.

Natural Sciences—

1. Define latent heat and sensible heat. Name in their order the colors of the solar spectrum.
2. Why is the boiling point of water lower on Pike's peak than at sea level? If the pendulum of a clock is too long, how will it affect the clock as a timepiece?
3. What is the center of gravity? To what angle may a body be inclined from the vertical without falling?
4. Describe the growth of a plant from the seed. Name and describe the parts of a flower.
5. How would you determine whether a plant is an endogen or an exogen? What is fruit?
6. What is the principle of zoölogical classification? Why are some animals called cold blooded and others warm blooded?
7. Explain the process of digestion in ruminants. Define antenna, larva, gills, articulata.
8. Name six fur bearing animals and give classification of each.
9. Give in order of age the three oldest ages of rock formation. How were gorges, cañons, and gulches formed?
10. Name six metals found in the Rocky mountains. Mention some of the igneous rocks most common in Colorado. What is granite? What is galena?

Geography—

1. Under the general law of cause and effect, what relation does geography bear to history?

2. How does the land surface of the globe compare in extent with the water surface? Name ten European countries and give the capital of each.

3. Define latitude, longitude, zenith, nadir, zone.

4. What natural causes have contributed to the commercial prosperity of the United States?

5. Name five important rivers of the world and tell into what body of water each flows.

6. Give five countries ruled by a republican form of government. What three foreign countries are being rapidly changed by the introduction of the railway and telegraph?

7. Does the meridian that passes through Chicago touch South America? Give the capital of the Hawaiian republic.

8. Describe modern Greece and its government. Name its chief cities.

9. Bound the state of Colorado. Into how many counties is the state divided?

10. Is Denver north or south of the parallel of latitude that passes through the capital of the United States?

Orthography—

1. Define synonym, homonym, root, derivative.

2. What is the two-fold use of syllabication?

3. Build three words using the stem *viv*; two, using the stem *voc*.

4. Give all the consonants that are ever accompanied with diacritical marks. Mark the pronunciation of the following words: Buddha, peremptory, vagary, apparatus, hygiene.

5. Write words illustrating the sounds indicated by the following: a, ó, u, ç, th.

6-10. The spelling, as shown in all the papers of this examination, will count one-half in the marking of orthography.

**QUESTIONS FOR THE COUNTY EXAMINATION OF
TEACHERS, DECEMBER 17 AND 18, 1897.**

FIRST DAY, A. M.

School Law —

1. Give the substance of the act designed to prevent frauds in the letting of public contracts.
2. When, and in what manner, may a special meeting be called in a district of the third class?
3. Define school age; school census.
4. What provisions govern appeals from the district board to the county superintendent? From the county superintendent to the state board of education?
5. What does the compulsory education act provide?
6. When, and in what amount, is the district treasurer required to give bond?
7. What persons may vote upon the question of contracting a bonded debt?
8. What formality is required in order that district warrants may be legal?
9. What provision does the Constitution of Colorado make concerning text books?
10. What power has the state board of education in the matter of state diplomas?

Physiology and Hygiene—

1. Describe the lenses of the eye.
2. Give illustrations of the various joints and articulations of the human skeleton.
3. What is the difference between the voluntary and involuntary muscles? Give examples of each.
4. How do the bones and tissues change with advanced age?

5. What is the sympathetic nervous system?
6. Of what is blood composed? Define arteries, veins, capillaries.
7. How should water be purified for drinking purposes?
8. What is the difference between contagion and infection?
9. What are the membranes of the stomach? Of the intestines?
10. In their practical application, what points in physiology and hygiene should be regarded as most important?

Reading—

1. In the teaching of reading, what is the first essential? What importance should be given to the definition of words?
2. Of what value is sight reading? How should natural gesture work be taught?
3. What system of breathing should be taught? What effect has breathing upon tone production?
4. In the establishment of a school library, what class of books should first be chosen?
5. Develop by questions the following:
 "Heaped in the hollows of the grove, the autumn leaves lie dead;
 They rustle in the eddying gust, and to the rabbit's tread."

FIRST DAY, P. M.

Grammar —

1. Give rules governing the position of phrases.
2. Diagram the following:
 "Poetry is only the eloquence and enthusiasm of religion."
 Explain the use of the word *only* in the foregoing sentence.
3. Show, by example, that an adjective may be expanded into an equivalent phrase or clause.
4. What parts of speech may connect clauses? Illustrate.
5. Name and illustrate the offices of what, that, and but.
- 6-7. Classify the noun.
8. "We rise by things that are under our feet,
 By what we have mastered of good and gain;
 By the pride deposed and the passions slain,
 And the vanquished ills that we hourly meet."
 Outline an approved method of teaching pupils to analyze the foregoing sentence.
9. Give and illustrate the uses of the infinitive.
10. Give rules for the use of the dash, the interrogation, the bracket.

Civil Government—

1. How are judicial officers impeachable in most of the states?
2. What is a representative at large?
3. How many states held slaves at the adoption of the Constitution?
4. What provision does the Constitution make concerning the census? When was the first census taken?
5. What are the duties of the speaker of the house of representatives?
6. What is the origin of the constitutional provision that each senator shall have one vote?
7. Is the vice president of the United States a member of congress? Explain.
8. On what does the duration of congress depend?
9. What is a bankrupt law? What is the object of bankrupt laws, and how do they differ from insolvent laws?
10. Define piracy, felony, treason. What are the constitutional provisions concerning each of the foregoing?

Writing — .

1. Of what use is the dry pen in the teaching of beginners? How is it frequently employed?
2. What movement exercises are helpful in the instruction of pupils? In teaching the vertical system, what principle must be first impressed upon beginners?
3. How is symmetry taught to young writers? Why is it of fundamental importance to compel care in the formation of letters?
4. Compare the vertical and slant systems of writing, giving what are claimed as the special advantages of each.
5. Write:
 "But, thinkin' of the things yer'd like to see upon that tree,
 Jest 'fore Christmas, be as good as yer kin be."

SECOND DAY, A. M.

Arithmetic—

1. Find the missing term of the proportion $3 : 37 :: (?) : 5.6$.

28
2. If cloth is bought at \$4 a meter and sold at \$5 a yard, how much is gained on 60 meters?

3. Find the difference between the true discount and the bank discount of \$1,000, for 1 year, 3 months, 15 days at 7%.

4. What is the face of a draft due 90 days after sight, with interest at 5%, which can be bought for \$1,808.25, when exchange is $1\frac{3}{4}\%$ premium?

5. Find the cube root of $\frac{2}{3}$, to three places of decimals.

6. How many feet of fencing will be required to enclose a circular acre?

7. What is the difference between the cube root of the least common multiple of 94,106 and 202,484, and the square root of their greatest common divisor?

8. Divide 7,000 by $.00002\frac{1}{3}$.

9. Reduce $.6 + 4\frac{2}{3}$ of $.8$ to a single fraction.

$$\frac{2}{3} \text{ of } 6$$

10. A man agreed to labor at the rate of \$1 for January, \$2 for February, \$4 for March, and so on, and to accept for his year's services as much as would be due him under this agreement for December; how much would he receive?

Theory and Practice—

1. What is the ethical value of teachers' examinations?

2. Is scholarship a factor in the good disciplinarian? Give reasons.

3. Give a practical application of the laws of attention.

4. What forces in history should be emphasized?

5. What place should English grammar have in the course of study for the high school?

6. Define: Instruction, teaching, training, learning, study, education.

7. When should written tests be given in grammar?

8. What is the object of the recitation?

9. When should the question method be used? Why? When should the topic method be used? Why?

10. In the study of geography, how much attention should be given to map drawing? Why?

Orthography—

1. Write four words representing four sounds of "a;" two words representing two sounds of "i." Indicate the sounds by diacritical marks.

2. Write three words with Latin suffixes; three with Anglo-Saxon suffixes.

3. What are the aspirates?
 4. Define vowels, consonants, diphthongs.
 5. Define a primitive word; a derivative word.
-

SECOND DAY, P. M.

Geography—

1. Draw a map of Colorado, locating Denver, Colorado Springs, Pueblo, Leadville, and Cripple Creek.
2. Tell something about the climate and topography of Alaska. Where are the Klondike gold fields?
3. What causes determine the width of the torrid zone?
4. Who is the principal executive officer of Ireland, and what is the home rule agitation?
5. What form of government exists in Austria?
6. What is meant by the longitude of a place? Where must a place be situated to have neither latitude nor longitude?
7. Name three rivers that flow into the Arctic ocean.
8. Name the principal divisions of Africa, and tell to what powers they belong.
9. State briefly the cause of the changes of the seasons.
10. Would the annexation of Hawaii be of any material advantage to the United States? How many states in the Union?

United States History—

1. What was the purpose of the first continental congress?
2. What was the origin of the public domain in the United States?
3. What provisions does the constitution make concerning United States courts?
4. Give an account of the "X, Y, Z" mission.
5. What was the origin of the custom of the president's sending written messages to congress?
6. Give an account of the rise of state banks.
7. What tract was known as the "Great American Desert?"
8. What was the Dred Scott decision? Its effect?
9. Give an account of the Lincoln-Douglas debates.
10. Outline the financial policy of President Grant.

Natural Sciences—

1. Explain Newton's three laws of motion.
2. By means of a diagram, explain the use of a convex lens.
3. How does the circulation of the blood of birds differ from that of reptiles?

4. Describe an earth worm. Mention two ways in which it improves the soil for vegetation.

5. What are the essential organs of a flower?

6. Mention three methods provided by nature for the distribution of seeds.

7. Classify the following, according to the families to which they belong: Pumpkin, melon, grape, plum, pear.

8. Mention two ways in which ice acts as a geological agent. Explain how the soil of the earth has been formed.

9. Distinguish between a vein and a dike. Account for the formation of each.

10. Arrange the following, in the order of their appearance on the earth, and name a geologic age during which each was abundant: (a) fishes; (b) mammals; (c) birds; (d) reptiles.

QUESTIONS FOR THE COUNTY EXAMINATION OF TEACHERS, MARCH 18 AND 19, 1898.

FIRST DAY, A. M.

Arithmetic—

1. What is ratio? Define proportion. What is a root? Define mensuration.
2. How is the circumference of a circle found?
3. Give the rule for finding any side of a right angled triangle.
4. What is the difference between meridian and standard time? To which division of standard time does Denver belong?
5. A and B together can do a certain piece of work in 40 hours, and B can do it alone in 60 hours. In how many hours can A alone do it?
6. In a city of 57,840 inhabitants, .125 of the population are children attending the public schools. Find how many children attend the public schools.
7. A cubical block contains 64 cubic feet: what is the distance from one corner to the opposite diagonal corner?
8. The interest on a note for 2 years 3 months and 18 days at 8% was \$155.02. What was the face of the note?

9. Change $\frac{1}{13}$ of $\frac{1}{1+\frac{1}{3}}$ to a simple fraction and reduce to lowest terms.

10. What is the amount of an annuity of \$700 for 8 years at 6% compound interest?

Writing—

1. What relation does penmanship bear to drawing?
2. What four principles should be emphasized in the teaching of writing?

3. Compare the vertical and slant systems of penmanship giving the characteristics of each.

4. Outline a lesson in vertical writing.

5—10. Write the following:

When a deed is done for freedom,
Through the broad earth's aching breast
Runs a thrill of joy prophetic,
Trembling on from east to west.

Orthography—

1. How are the elementary sounds of the English language represented?

2. Define semi-vowels and mutes. What do you understand by the liquids?

3. What is a diphthong? What is a syllable? Define a word, a sentence.

4. Outline a method of teaching definitions.

5—10. The spelling, as shown in all the papers of this examination, will count one-half in the marking of orthography.

FIRST DAY, P. M.

Physiology—

1. Name the bones of the face. Where is the hyoid bone?

2. How are the bones nourished?

3. What is the use of muscles? Give examples of muscles not attached to bones.

4. How does muscular exercise affect the heart and lungs?

5. What is animal heat, and how is it generated?

6. What is the first use of foods?

7. Explain the change in the blood from venous to arterial, and arterial to venous.

8. What is a stimulant? Explain the effects of alcoholic drinks upon the tissues of the brain.

9. Name the organs of digestion. Of what part does a tooth consist?

10. Describe the effect of light upon the eye. What precautions should a teacher take to prevent the impairing of sight among her pupils?

Reading—

1. What mental qualifications must a good reader possess?

2. How should a word picture be presented to children? What stress is to be put upon definitions?

3. How is good articulation to be secured? What position of the body is necessary for proper tone production?

4. Why is the precise placing of the vowels and consonants an important preliminary to exact pronunciation?

5. Demonstrate the best method for teaching the reading of the following lines:

“Tauler, the preacher, walked, one autumn day,
Without the walls of Strasburg, by the Rhine,
Pondering the solemn Miracle of Life;
As one who, wandering in a starless night,
Feels momentarily, the jar of unseen waves,
And hears the thunder of an unknown sea,
Breaking along an unimagined shore.”

United States History and Constitution—

1. Name the three classes of colonial government in existence at the time of the revolution.

2. Where was the national capital during Washington's administration? In whose administration was it moved to Washington?

3. Name four states taken from the territory comprised in the Louisiana purchase.

4. Name five great battles of the civil war.

5. When was Colorado organized as a territory? What first attracted large numbers of settlers?

6. What caused the war with Mexico?

7. In the interest of what nations did the following explorers make voyages to America: De Soto; Balboa; Hudson?

8. About what time did the nation begin to coin gold and silver into money?

9. What right does the fifteenth amendment secure? When was it passed by congress?

10. What important questions of national policy have confronted President McKinley since his inauguration?

SECOND DAY, A. M.

Natural Sciences—

1. On what does the pitch of sound depend? Why will not a siphon work in a vacuum?

2. What causes the agitation of boiling water? Which is the better conductor of sounds, solids or gases?

3. State two conditions essential to the germination of seeds. What part of the flower develops into fruit?

4. Of what use to the plant is the starch found in the kernel of corn?

5. Describe the cotyledons of the bean plant.

6. State a peculiarity of the structure of the bones of birds which illustrates adaptation of organ to function.

7. Classify the following animals: bison, mountain lion, coyote, grizzly bear, beaver.

8. What are moraines? What evidences of the glacial period are to be found in Colorado?

9. How does graphite differ from coal? Are there any extensive coal deposits in Colorado?

10. What should be taught about quartz, mica, and feldspar?

School Law—

1. Give full explanation of the method of conducting the county teachers' examination.

2. Give grades and distinguishing features of county teachers' certificates.

3. When and by whom may a teacher's certificate be endorsed? When renewed?

4. What is a school year? A school month?

5. Name the powers of the school board.

Theory and Practice—

1. What methods should be employed in order to secure a full, prompt, and regular attendance.

2. What should be the aim in primary language lessons?

3. What should be the ratio of oral teaching to book study in the seventh and eighth grades?

4. What errors should be avoided in the union of book study and oral teaching?

5. Should the initial process in teaching geography consist of analysis or synthesis? Why?

6. Name the methods of calling on pupils to recite? Which method is preferable? Why?

7. Outline a recitation on "Mountains" for a class in the sixth grade.

8. Name the school incentives. In what relation do incentives stand to the training of the will?

9. Explain what is meant by child study.

10. Is child study or self study of more importance to the teacher? Why?

SECOND DAY, P. M.

Grammar—

1. What prominence should be given written analysis? Why?
2. Define comparison, declension, apposition, conjugation, ellipsis.
3. Give an approved method of teaching technical grammar.
4. State the chief particulars in which participles and infinitives agree.
5. Write a sentence containing *as*, used as (a) an adverb; (b) a conjunction.
6. Write a sentence containing a clause used as the object of a verb.
7. Diagram the following:
 "It was a great thing to see that the wisdom, courage, and patriotism of a king could preserve him for such a long time in the memory of the people over whom he once reigned."
8. Give two accepted methods of teaching children to express their thoughts in writing.
9. Outline a method of teaching paragraphing.
10. How far does a knowledge of English grammar enable one to write and speak correctly?

Geography—

1. Name the transmississippi states, giving the capital of each.
2. Enumerate ten of Colorado's principal sources of wealth. What are the chief industries of the state?
3. When is the earth at its perihelion? When at its aphelion?
4. What places have no longitude? What places have no latitude?
5. Name the British Isles. What does the British empire comprise?
6. What are the five great powers of Europe? Which stands first in educational progress?
7. Locate Cuba. What was the population of Havana at the outbreak of the present war?
8. What countries occupy the Scandinavian peninsula? What two races dwell in the extreme north of this peninsula?
9. What great commercial city in the valley of (a) the Mersey; (b) the Elbe; (c) the Clyde; (d) the Nile; (e) the La Plata?

10. What is Oceanica? Name ten of the world's greatest seaports?

Civil Government—

1. What is the special character of the house of representatives?

2. How long is the representative term?

3. How often do we have a new house? How are congresses numbered?

4. Where and for what purpose does the word "slavery" occur in the Constitution?

5. What bills must originate in the house?

6. How long does the senate exist?

7. What does the constitution say as to what shall constitute a quorum in either house?

8. Define finances, taxes.

9. What territory did our government acquire before the adoption of the constitution?

10. In whom may congress vest the appointment of inferior officers?

QUESTIONS FOR THE COUNTY EXAMINATION OF TEACHERS, AUGUST 19 AND 20, 1898.

FIRST DAY, A. M.

Arithmetic—

1. Discriminate between the terms: difference and remainder; unit of a fraction and fractional unit.

2. How should you explain to a class the fact that the change of a fraction to either higher or lower terms does not alter its value?

3. If a pole $12\frac{1}{2}$ feet long casts a shadow $9\frac{3}{4}$ feet long, how long must a pole be to cast a shadow 21 feet long at the same hour of the day?

4. If five men can do a piece of work in 4 hours, 30 minutes, 20 seconds, how long will it take 8 men to do the work?

5. A man visiting Chicago discovered that his watch was 1 hour, 45 minutes fast. Did he live east or west of Chicago, and how many degrees?

6. How much less is a discount of $\frac{1}{4}$ and 15 per cent. than a discount of 40 per cent. from a bill of \$346.40.

7. Reduce to proper fractions in their simplest form

$$.7\bar{4}7; .36\bar{3}6; 32\frac{7}{8}; \frac{2}{5} \text{ of } 8-2\frac{3}{4}.$$

$$54\frac{11}{12}$$

8. A merchant buys \$2,645.50 worth of goods on 3 months' credit, but is offered 3 per cent. discount for cash. Which is the better bargain, and how much is the difference when money is 7 per cent. per annum?

9. James Welch has a debt in Chicago amounting to \$4,489.32. For what sum must a note be drawn at 90 days, that when discounted at 6 per cent. at a Chicago bank will just pay the debt?

10. The distance between the opposite corners of a square field is 60 rods. How many acres in the field?

Theory and Practice—

1. Discuss the value of oral work; of written work.
2. What feature of child study should be considered first by the teacher? Why?
3. Distinguish between methods of discipline from the physical and from the psychological standpoint.
4. What abuses may result from the present system of grading?
5. What should be the law of punishment in a school?

Reading—

1. How can pupils be taught to read intelligently?
2. Why should definition and word analysis be made of primary importance?
3. In giving a lesson, what stress should be put upon sight reading?

4. What effect has the position of the body upon tone production?

5. Show how you would teach a class the following lines:
 "At the close of a winter day,

Their anchors down, by London town, the Three Great Captains lay;

And one was admiral of the North from Solway Firth to Skye,
 And one was Lord of the Wessex coast and all the lands thereby.
 And one was Master of the Thames from Limehouse to Blackwall,

And he was Captain of the Fleet—the bravest of them all."

FIRST DAY, P. M.

Natural Sciences—

1. What is the difference between determinate and indeterminate inflorescence? What is a perfect flower?
2. What are the three parts of a plant in growth? What is the office or use of each part?
3. Give a botanical description of the columbine.
4. Beginning with the lowest, name in order the geological ages of the world.
5. Distinguish between a vein and a dike. Account for the formation of each.
6. Define acoustics. What experiment proves that some medium is essential to the transmission of sound?

7. What is momentum? How is the momentum of a moving body measured?

8. State the difference between mechanical and molecular motion.

9. Define the terms herbivorous, amphibious and viviparous, as applied to vertebrates and name two vertebrates of each kind.

10. Name three kinds of coral. Mention the general characteristics of the reptilia.

Civil Government—

1. Distinguish between direct and indirect taxes. Give an example of each.

2. In what cases may the United States courts have jurisdiction?

3. Compare the two branches of the state legislature as to number of members and terms of office of members.

4. What is the term of office of a district judge?

5. When and by whom may the militia be called forth?

6. What provision does Colorado make for higher education?

7. What is a poll tax?

8. Define ambassador, minister, consul.

9. What is the president's military position?

10. What is the necessity of a navy? In whom is the power vested to provide and maintain the navy?

Orthography—

1. Give three markings each of a, e, i, o, and u, and illustrate in words.

2. Mark the accents and divide the syllables in the following: Advertisement, bronchitis, laundry, extraordinary, camera, honorary, exhilarate.

3. Explain the advantages to be derived from written work in spelling.

4. Name and define vowels and consonants. When are w and y vowels?

5. Mention the significant parts of a word.

SECOND DAY, A. M.

Grammar—

1. What changes have been made during the past few years in the methods of teaching English?

2. What is the best method of mastering the classic English of the best writers?

3. Define substantive, inflection, syntax, idiom.

4. Use the participle having an object, as the object of a preposition.

5. Write a compound sentence of two members. Name five auxiliary verbs.

6. Give an example of a proper noun used as a common noun.

7. Give three ways of pluralizing compound nouns. Illustrate each.

8. Illustrate the infinitive used as (a) subject, (b) object, (c) adverbial modifier.

9. Digram:

"A good deed is never lost; he who sows courtesy, reaps friendship; and he who plants kindness, gathers love."

10. What is a direct quotation? An indirect quotation? Illustrate each.

Geography—

1. At what season is the earth nearest the sun? Explain why it is nearer one time than another.

2. What effect will the annexation of the Hawaiian islands have upon the government of the new republic?

3. Locate Porto Rico. Name its principal city.

4. Where is Santiago de Cuba situated? Tell something about its population.

5. Name and give the location of five great seaports of the world.

6. Of what does the empire of Japan consist? What is Oceania?

7. Give three proofs that the world is round.

8. What are the divisions of British America? Which is the most important country in South America?

9. What are the five great powers of Europe? Which stands first?

10. Do degrees of latitude vary in length? Do degrees of longitude vary?

School Law—

1. What is the legal method of securing free text books in a school district?

2. When may a county superintendent appoint a school director?

3. What are the statutory provisions for holding normal institutes?

4. What are the statutory provisions concerning free kindergartens?

5. For how long a term is a county superintendent elected?
A school director?

SECOND DAY, P. M.

United States History and Constitution—

1. Explain the mutiny act; the stamp act.

2. Name the important events of the present war between the United States and Spain.

3. What important facts were established as the result of Magellan's voyage?

4. Distinguish between the treatment accorded the Indians by the early English and French settlers.

5. Considering the colonies in geographical groups, what were the occupations of (a) the Eastern; (b) the Middle; (c) the Southern?

6. When and where did the first Continental congress assemble? What did it accomplish?

7. What were the sources of the United States Constitution?

8. What effect did the building of the Erie canal have on the business methods of the country?

9. What influences were instrumental in developing the western states?

10. Explain the Venezuelan boundary dispute.

Physiology—

1. How many bones in the head and face?

2. Describe the vocal organs and explain how the quality of tones is affected by the way they are used.

3. What is the effect of impaired hearing or imperfect sight upon the intelligence of a pupil?

4. Have alcohol and food any properties in common?

5. Define asepsis. What is an antiseptic?

6. What is the structural difference between an artery and a vein?

7. Into what three divisions is the nervous system divided?

8. Name the two kinds of muscle fibre.

9. Describe the respiratory organs.

10. What effect has physical exercise upon the muscles and tissues?

Writing—

1. At what grade should young pupils begin to write?
2. State three results to be secured in teaching penmanship.
3. Outline the principles to be observed in teaching the vertical system of penmanship.
4. What defects are most likely to distinguish the vertical writing of beginners?
5. Write:

See what a lovely shell,
 Small and pure as a pearl,
 Lying close to my foot,
 Frail, but a work divine,
 Made so fairly well
 With delicate spire and whorl,
 How exquisitely minute
 A miracle of design!

STATEMENT OF CANDIDATE.

STATE EXAMINATION HELD AT DENVER, COLO.,
AUGUST, 189..

Name

P. O. Address.....

Birthplace Age.....

Successful experience in teaching.....years.

Have you taught in the state two years?

Where?

With names and postoffice addresses, give three references as to
moral character.

.....

.....

.....

Have you a first grade certificate in full force at this time?.....

Give the name of the county or city in which your certificate was
issued

**QUESTIONS FOR THE EXAMINATION OF APPLICANTS
FOR STATE DIPLOMAS, AUGUST 25-27, 1898.**

FIRST DAY, A. M.

Psychology—

1. What do you understand by motor and sensor centers?
2. Define ear, eye, and touch memories.
3. Give a physiological explanation of apperception.
4. What is the effect of mental effort upon the blood supply of the brain? How is this effect determined?
5. What relation do ideas sustain to emotions?

Pedagogy—

1. Give the etymological and practical meanings of the word pedagogy.
2. Upon what is pedagogy based? Discuss.
3. What is the pedagogical value of interest? Give a psychological interpretation of it.
4. What is the psychology of number study?
5. In what way does psychology help in the government of a school?
6. What do you understand by fatigue? In what way will a study of it help you in teaching?
7. What do you understand by the "culture epoch theory"?
8. What bearing has the doctrine of evolution upon the science and art of teaching?
9. Name the books you have read in psychology and pedagogy?
10. Give a review of one of them.

Algebra—

1. Resolve the expression $x^4+x^2y^2+y^4$ into two factors by first bringing it into the form of the difference of two squares.

2. If we have two ordinary polynoms of x , and we go through the process of determining the highest common factor of the two polynoms, show that the two polynoms have no common factor (containing x), if the last division leaves a remainder, which is numerical (i. e. free from x , but not zero).

3. Solve the system of linear equations:

$$2x + 3y - z = 7$$

$$x - 5y + 4z = -23$$

$$3x - y - 7z = 16$$

Make your own choice in regard to method of solution, but represent systematically.

4. Represent $a \sqrt[3]{b^3} \sqrt[5]{c^2} \sqrt[5]{d}$ in the form of a single radical.

5. If four quantities: a, b, c, d , are in proportion, show that: $a, a+b, c, c+d$ are likewise in proportion.

6. If we have a "geometrical series" as follows:

$$a, ar, ar^2, ar^3, \dots$$

show, that the sum of n terms, starting from " a " is equal to:

$$a \frac{r^n - 1}{r - 1}$$

7. If \$10,000 are put at annual compound interest at 5%, give formula for the amount it will have accumulated in " n " years.

8. Let $a^x = b$, show how to calculate x by the aid of logarithms.

9. The four numbers 1, 2, 3, 4, shall be the roots of an equation of the 4th degree, find the equation and show how.

10. Given the cubic equation:

$$2x^3 - 7x^2 + 2x + 3 = 0$$

and let it be known, that: 3 is one root of this equation, then determine the two other roots.

X. B. The examination is on five (5) questions, selected at the pleasure of the applicant. Indicate distinctly the numbers omitted, but do not attempt to answer more than five.

FIRST DAY, P. M.

Physical Geography--

1. Explain the process of erosion.

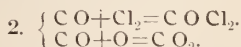
2. How are deltas formed, and what conditions favor their growth?

3. What are some of the noticeable features of the climate of Alaska? Account for them.

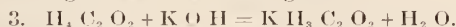
4. What seasons has southern California? Explain their cause.
5. What season has Venezuela now? Why?
6. By what evidence would you know an ocean current in crossing it?
7. Describe the appearance and phenomena of a glacier.
8. What benefits do we derive from forests?
9. Explain the nature and cause of the prevailing winds in temperate latitudes.
10. State your idea of the conditions under which rain is formed.

Chemistry—

1. Discuss the formula of water.



In each of the above equations, discuss the ratios by volume of the original and resultant gases.



* What inference as to the structure of acetic acid may be drawn from this equation?

4. Formulate these compounds:

(a) Potassium hydroxide. (b) Lead nitrate. (c) Primary ammonium sulphate. (d) Ortho-phosphoric acid. (e) Phosphine.

5. What elements and compounds are found in the atmosphere?

6. Write an equation showing the production of ammonia (N H_3), and explain it.

7. Write a brief account of the properties and uses of sulphuric acid.

8. Explain the significance of symbols.

9. Write a chemical equation and explain the operation indicated.

10. Define: "precipitate," "filtrate," "solution," "decomposition," "substitution" (or "replacement").

X. B. Take five questions only.

Geometry—

1. The sum of the three straight lines drawn from any point within a triangle to the three vertices, is less than the sum and greater than half the sum of the three sides of the triangle.

2. If P is any point within a circle whose center is O, and A P O B is the diameter through P, then A P is the least, and P B the greatest distance from P to the circumference.

3. From two given points on the same side of a given line, draw two straight lines meeting in the given line and making equal angles with it.

4. Divide a given straight line in extreme and mean ratio.

5. Two triangles, having an angle of one equal to an angle of the other, are to each other as the products of the sides including the equal angles.

6. Two chords, A B, C D of a circle intersect at right angles at P. Then $\overline{AP}^2 + \overline{PB}^2 + \overline{CP}^2 + \overline{PD}^2 = \text{square of diameter.}$

7. The square of the diagonal of a cube equals the sum of the squares of three edges.

8. Through any point, O, a plane can be passed parallel to any two given straight lines, A B, C D, in space.

9. In two polar triangles, each angle is measured by the side of the other triangle lying opposite to it.

10. The sum of the angles of a spherical triangle is less than six, and greater than two, right angles.

N. B. Answer five questions only, omitting either all the odd or all the even numbered ones.

SECOND DAY, A. M.

Logic—

1. Define judgment and reasoning, distinguishing carefully between them.

2. "The extension and intension of terms vary in an inverse ratio to each other." Explain this law, using the terms metal and iron.

3. What is meant by the distribution of subject and predicate?

4. Write a syllogism containing an "undistributed middle," and state whether the conclusion is true or false.

5. Define inductive reasoning and apply it in proof of the nebular hypothesis, using Saturn's rings and other phenomena. State the dangers in its use.

Political Economy—

1. What are the conditions which you call "hard times?"

2. Trace the effects through which a large wheat crop may cause prosperous times to all other branches of business.

3. Suppose liquors are neither harmful nor beneficial, what is the economic effect of the liquor business? Explain.

4. On what class of commodities would a protective tariff naturally be imposed? Why?

5. On what class of commodities would a purely revenue tariff naturally be imposed? Why?

6. What do you mean by "working capital?" Show by an illustration its uses.

7. What is a legal tender and give an example of it in the United States; of money not a legal tender.

8. What conditions determine the location and favor the growth of a large city?

9. Explain how a large part of the business of the United States is done on the credit system.

10. How would the United States be affected if England should have a panic?

Trigonometry—

1. Define sin, cos, tg and ctg of an angle in a rightangled triangle as ratios of sides of that triangle.

2. Derive values of sin (30°) and cos(45°) from two right-angled triangles, having respectively 30° and 45° as one angle.

3. State what signs "sin, cos, tg and ctg" have in the four quadrants.

4. By what equation are sin and cos of the same angle connected?

5. Show that the following formula is correct:

$$1 + \text{tg}^2 x = \frac{1}{\cos^2 x}.$$

6. Demonstrate the formula:

$$\sin (u + v) = \sin u \cos v + \cos u \sin v.$$

7. Derive the formula:

$$\cos 2x = 1 - 2 \sin^2 x$$

by the aid of the given formula:

$$\cos (x + y) = \cos x \cos y - \sin x \sin y.$$

8. Derive the formula:

$$\text{Tg}(u + v) = \frac{\text{tg } u + \text{tg } v}{1 - \text{tg } u \cdot \text{tg } v}$$

from the formulas for sin (u + v) and cos (u + v).

9. What is tg (2x) expressed in terms of tg x?

10. a, b, c, representing the sides of a triangle and A, B, C, their respectively opposite angles, show that

$$a : b = \sin A : B$$

and express as a theorem in words.

N. B. Eight (8) questions to be chosen by the applicant. Indicate distinctly which questions are omitted, but on no account attempt to answer more than eight.

SECOND DAY, P. M.

1. Decline in full the German articles.
2. Define relative pronoun. Decline all personal pronouns.
3. Write the present, imperfect, perfect and future indicative of sein and haben.
4. Define reflexive verb and give five examples.
5. What is the place of the adverb in a German sentence? How are adverbs compared?
6. Give principal parts of verbs meaning to stand, see, run, fall, and grow.
7. Write a synopsis in the third person of a verb in the passive voice.
8. Seven prepositions used always with the dative.
9. Translate: I am glad to hear it. May we go now? The young man raised his head and answered, "I should like to see that city."
10. Translate: I have not forgotten what my father said when I showed him the letter. The one is going, the other coming.

Mineralogy and Geology—

1. How are water falls formed?
2. By what rock structures do we recognize sedimentary rocks?
3. Define: Shale and slate. What is the distinction between them?
4. What is the difference between quartz and silica?
5. What is the composition of gypsum, marble, halite?
6. Where is anthracite coal found in the United States?
7. Why does the presence of a large number of lakes indicate a new topography?
8. Describe a trilobite; a brachiopod.
9. What signs of the former presence of a glacier should be looked for in a mountain valley?
10. How do you tell the difference between quartz and orthoclase?

Astronomy—

1. What is the nature of the so-called fixed stars? What body of the solar system do they most resemble?
2. Why are the zodiacal constellations distinguished from others and specially named? Briefly explain the precession of the equinoxes.

3. In not less than one page of writing discuss "The Nature and Condition of the Moon."

4. Write a list of the major planets in the order of their distances from the sun, and state the number of satellites (so far as known) accompanying each.

5. What are meteors (meteorites) and what causes the periodic occurrence of certain meteoric showers?

General History—

1. Date, cause, and result of the Peloponnesian war.

2. Say something about the Gracchi, Cicero, Catiline, Virgil and Cleopatra.

3. Give an account of the capture of Constantinople by the Turks.

4. What were the events that brought about the Norman rule in England?

5. Date, causes, and results of the Reformation.

6. What resulted from the English Revolution? The French Revolution?

7. What was accomplished by the Crusades?

8. What blood relationship existed between Queen Elizabeth and Mary Queen of Scots?

9. Who were the Lollards? The Huguenots? The Covenanters?

10. When did the reign of Queen Victoria begin? Who is the emperor of Germany?

THIRD DAY, A. M.

Physics—

1. Briefly describe the general nature of the methods used in discovering and confirming physical laws.

2. State the three propositions usually called "Newton's Laws of Motion."

3. Starting with the proposition that the velocity of a falling body increases directly as the time, prove that the distance passed over varies directly as the square of the time.

4. State the distinction between "fundamental" units and "derived" units. Name the three kinds of units usually taken as the fundamental ones in physical measurements.

5. Define energy in general. Name and define the two general forms of energy. If there were in the universe but one body, and this of unalterable form and size, could it possess potential energy? What form of energy could it possess.

6. How many ergs of work must be done upon a mass of 10 grammes to change its velocity from nothing to 50 centimeters per second? Also, to change its velocity from 25 centimeters per second to 50 centimeters per second?

7. State the principal circumstances which determine the pressure at a point in a fluid at rest. State the principal laws of hydrostatics.

8. Show by means of diagrams the effect produced by a convex lens upon the rays of light which reach it from a luminous point A,

(1) When the distance of A from the lens is greater than the principal focal distance, f , of the lens;

(2) When the distance of A from the lens is equal to f ;

(3) When the distance of A from the lens is less than f .

Draw a figure for each case; show the image (or focus) real or virtual; and mark it in each case with the letter I.

9. Show, by means of a diagram and verbal explanations, how a convex lens produces a real image of an object. Show the course of the rays passing through the lens from at least three points, A, B, C, of the object to their images, A', B', C'. What must be the distance from object to lens in order that a real image may be formed?

10. Name the various effects of the electric discharge of current, and give an example illustrating each kind of effect.

Structural Botany—

1. What are the three most prominent characteristics that separate the two great classes monocotyledons and dicotyledons?

2. How are buds arranged on the stem? What is the relation between the arrangement of buds and the arrangement of leaves?

3. Why are leaves usually broad and flat? Give the distinctions indicated by the terms lobed, cleft, parted, and divided.

4. Describe the two principal modes of venation in leaves.

5. What are the differences between roots and leaves?

6. Name the organs of a complete flower, and give the use of each.

7. Explain the terms union and consolidation as applied to the organs of flowers.

8. What is a spike? An umbel? A cyme?

9. What is a fruit? Explain the structure of the strawberry. The raspberry.

10. What is a berry? A drupe? An akene?

Zoology—

1. What subjects are included in the term biology?
2. Define embryology, histology, and entomology.
3. What services did Buffon, Cuvier, and Agassiz render to the science of zoology?
4. Give names to the different branches of the animal kingdom.
5. Describe sponges. Where are marketable sponges found?
6. State the general characteristics of insects? What insects are most injurious to plant life in Colorado?
7. Describe the breathing apparatus of fishes. State, approximately, the number of species of living birds.
8. What are the peculiarities in the stomach of ruminants.
9. Trace the development of the nervous organism from the lower to the higher forms of animal life.
10. What instruction in zoology should be made a part of the common school course; the high school course; and the college course?

French—

1. Give the principal parts of the verbs *etre*, *avoir*, *donner*, *finir*, *vendre*.
2. Translate: *Cependant la belle saison etait passee, il fallut revenir a Paris. Ma sœur paraissait malade; on disait qu'elle avait besoin des secours des plus grands medecins. Quand nous fumes arrives ici, elle se trouva encore plus malade qu'auparavant, et bientot elle ne sortit plus de sa chambre. Souvent je voyais les femmes de services echanger a voix basse des paroles tristes, et maman en causant avec ma sœur et moi, se cachait quelquefois pour pleurer. . . . Mais je ne comprenais pas encore ce que c'etait que mourir.*
3. Write the infinitive of the verbs italicized.
4. Give rules for the agreement of the past participles with subject or object of the verb.
5. Translate: I have written three letters. Have you seen them? They are long and well written.
6. Translate: Un jour on m'avait laisse seul un moment aupres de ma sœur. Je la croyais endormie, quand tout a coup je l'entendis m'appeler d'une voix faible.
7. Translate: Give me that book; do not give it to him. It is mine, and it is the one I like best.
8. Translate: I know him, and I know he will come. Do you not think so?

9. Translate: Croyez-vous qu'il *soit* ici avant moi? Oui, je crois qu'il y sera. Explain the use of the subjunctive.

10. Translate: Depuis quand etes-vous ici? Il y a deux mois que j'y suis. Quel age a votre fils? Il aura trente ans demain. Je ne croyais pas qu'il fut si age.

THIRD DAY, P. M.

Latin—

1. Translate: Exigua parte aestatis reliqua, Caesar, etsi in his locis, quod omnis Gallia ad septemtriones vergit, maturae sunt hiemes, tamen in Britanniam proficisci contendit, quod omnibus fere Gallicis bellis hostibus nostris inde subministrata auxilia intelligebat; et si tempus anni ad bellum gerendum deficeret, tamen magno sibi usui fore arbitrabatur, so modo insulam adisset et genus hominum perspexisset, loca, portus, aditus cognovisset; quae omnia fere Gallis erant incognita. Neque enim temere praeter mercatores illo adit quisquam, neque his ipsis quidquam, preter oram maritimam atque eas regiones quae sunt contra Gallias, notum est. Itaque vocatis ad se undique mercatoribus, neque quanta esset insulae magnitudo, neque quae aut quantae nationes incolerent, neque quem usum belli haberent aut quibus institutes uterentur qui essent ad majorum navium multitudinem idonei portus, reperire poterat.

2. In the first sentence give the construction of bellis, hostibus, auxilia, and fore.

3. In the last sentence justify the use of the mood of each verb.

4. Translate into Latin: "After these matters had been determined and he had found weather suitable for sailing, about the third watch, Caesar embarked; and he ordered the cavalry to set out to the more distant harbor and to board the vessels and to follow him."

5. Translate:

Tum breviter Dido, voltum demissa, profatur—561

'Solvite corde metum, Teucri, secludite curas.

Res dura et regni novitas me talia cogunt
moliri, et late finis custode tueri.

Quis genus Aenaeum, quis Troiae nesciat urbem,
virtutesque virosque, aut tanti incendia belli?

Non obtusa adeo gestamus pectora Poeni.

mec tam aversus equos Tyria Sol iungit ab urbe.

Seu vos Hesperiam magnam Saturniaque arva,

sive Erycis finis regemque optatis Acesten.

auxilio tutos dimittam, opibusque iuvabo.
 Voltis et his mecum pariter considerare regnis;
 urbem quam statuo vestra est, subducite navis;
 Tros Tyriusque mihi nullo discrimine agetur.
 Atque utinam rex ipse Noto compulsus eodem
 adforet Aenae! Equidem per litora certos
 dimittam et Libyae lustrare extrema iubebo,
 si quibus eiectus silvis aut urbibus errat.—578

Mark the scansion of lines 567 and 573.

Literature and Rhetoric—

1. Name the author of each: *The Canterbury Tales*, *The Faerie Queen*, and *The Deserted Village*.

2. What is an allegory? Name three allegories, and give the author of each.

3. What are the characteristics of epic poetry? Name three noted epics in general literature.

4. Give the origin of the English drama. Name Shakespeare's contemporaries.

5. Who were the first English novelists? Give a production of each author named.

6. Give date limits to the literary period represented by Dr. Johnson. What noted names are connected with this period?

7. Make a few statements about the writings of each: Macaulay, Scott, and Lowell.

8. Give a short quotation from each: Bryant, Longfellow, Webster and Whittier.

9. What is a figure of speech? Name the most important figures.

10. Define style as used in rhetoric. Of what value is the study of rhetoric?

Physiology—

1. (a) Why is it necessary for animals to partake of food?

(b) Why should food be well masticated before it is swallowed?

(c) What becomes of the food? i. e., ultimately.

(d) Why is a varied diet better than a restricted one?

2. Describe the structure and action of the human heart.

3. (a) What is ventilation, and why is it necessary?

(b) Do the lungs expand themselves? How is respiration accomplished?

4. (a) How does expired air differ from that inspired?

(b) How are the lungs connected with the exterior?

(c) How is the voice produced?

5. (a) How do you account for the fact that we breathe, and the heart beats, without direct volition on our part?
(b) Describe the central nervous system of man.
6. (a) What are the functions of bones?
(b) Describe the vertebral column, and a vertebra.
7. (a) What are the functions of the skin? Describe its general structure.
(b) Why should the skin not only be kept clean, but be also rubbed briskly occasionally?
8. (a) What is the function of the kidneys?
(b) Where are they, and what is their shape and size?
9. Describe the structure of the ear.
10. Describe the structure of the eye.

Civil Government—

1. What qualifications make one eligible for the office of President of the United States?
2. What judgment can be rendered in case of impeachment?
3. Give date of the annual meeting of congress. How can this date be changed?
4. What power has the senate over bills for raising revenue?
5. Write that clause of the Constitution that relates to the coining of money.
6. How many grains of pure metal in a gold dollar? In a silver dollar?
7. When can the writ of habeas corpus be constitutionally suspended? What is an ex post facto law?
8. Name at least three distinct prohibitions placed, by the Constitution, upon the powers of the states.
9. How many presidential electors has a state? How is the manner of their appointment determined?
10. Where is the power to make treaties lodged? What exception to the power of reprieving and pardoning is named?

**QUESTIONS FOR THE EXAMINATION OF APPLICANTS
FOR STATE DIPLOMAS, AUGUST 24-26, 1898.**

FIRST DAY, A. M.

Algebra—

1. Factor the expression:

$$x^4 + x^2y^2 + y^4$$

and state principle involved in doing so.

2. Given two ordinary polynoms of "x" and "y"; (that is: each polynom consisting of a sum of terms of the form: $c x^n y^m$, where the coefficients "c" are whole numbers and "n" and "m" are whole positive numbers, including "0").

Give exact definition of the highest common factor of the two polynoms.

3. Give definitions of the symbols:

$$a^0; \sqrt[n]{a}; a^{\frac{2}{3}}; a^{-n}.$$

4. Solve the equation:

$$2x^4 - 3x^2 - 20 = 0$$

i. e., find the values of x, which satisfy the equation.

5. Describe method of solution of the system of equations:

$$\begin{aligned} 5x^2 - 4xy + y^2 &= 1 \\ 3x + y &= 5 \end{aligned}$$

6. Given the following three terms of a geometrical series:

1st term, 2nd term, 3rd term,

$$3, \quad \frac{3}{2}, \quad \frac{3}{4},$$

find the sum of 10 consecutive terms (commencing with 3 as first term) by using the general formula for the sum of geometrical series.

7. The numerical value of the expression: $\left(\frac{a\sqrt[3]{b}c^{\frac{2}{3}}}{d^{\frac{5}{6}}} \right)$, where a, b, c, d represent given positive numbers, is to be determined; show how this is to be done by the use of common logarithms.

8. Can the equation:

$$x^5 - 3x^4 - 5x^3 + 2x^2 - 7x + 6 = 0$$

be satisfied by a fraction in place of x ? (a fraction being a number of the form: where "m" and "n" are whole numbers with no common divisor, and "n" not unity).

Give answer in the form of a theorem.

9. Given the equation:

$$3x^4 + 5x^3 - x^2 - 2x + 8 = 0$$

determine a limited set of positive and negative whole numbers (eight numbers in all), among which every whole-numbered root of the above equation must be contained. In other words, show how to find all whole-numbered roots of an equation of the above form.

10. The equation.

$$2x^4 + 7x^3 - 2x^2 - 13x + 6 = 0.$$

has the two given roots: (+1) and (-2), find the two other roots of the above equation.

Answer five of these questions. Do not present more than five answers.

Civil government—

1. What power has the governor of Colorado over state legislation?

2. How are vacancies in a state's representation in congress filled?

3. Repeat the preamble, or enacting clause, of the Constitution of the United States.

4. How are treaties made, and, when made, what is their force?

5. Give the clauses of the Constitution relating to the coinage of money.

6. What are the qualifications of a presidential elector? Of a judge of the United States supreme court?

7. How do impeachments under the Constitution originate and how are they conducted? Who may be impeached?

8. Give the constitutional definition of treason. Who declares the punishment for this crime?

9. What is meant by the terms "original" and "appellate" as applied to the jurisdiction of the supreme court?

10. What two methods of ratifying amendments are referred to in the Constitution? Write the fifteenth amendment.

Botany—

1. Name the parts of the dicotyledonous embryo, giving the office of each.

2. How are buds arranged on the stem? Name the three kinds of buds.
3. What is a stolon? a sucker? a corm? a bulb?
4. What is the botanical difference between the tuber of our common or Irish potato and the tuber of the sweet potato?
5. What are the parts of a leaf? Define the terms ovate, linear and peltate as applied to leaves.
6. Describe the two principal modes of venation in leaves. What is the distinction between simple and compound leaves?
7. Name the organs of a complete flower in order from outside to center.
8. What is a raceme a corymb? a cyme?
9. Explain the use of the terms regular and symmetrical as applied to flowers.
10. What is an akene? a capsule? What is the edible portion of the apple? of the strawberry?

FIRST DAY, P. M.

Physics—

1. A ball weighing 2 kilogrammes moves without rotation and with a velocity of 10 meters per second. What is its kinetic energy expressed in ergs? If, while moving with the same linear velocity, the ball begins to rotate, will its kinetic energy be altered?
2. An air-tight rubber balloon full of gas is completely immersed in a large tank of water. If the balloon is near the surface of the water, is the buoyant force acting on it equal to greater or less than it would be if the balloon were at a considerable distance below the surface?
3. Explain the action of a siphon.
4. State Newton's law of cooling.
5. Assuming that the velocity of light is 300,000 kilometers in vacuo, what is its velocity in a piece of glass, the index of refraction of which is 1.66?
6. What is the difference between a real and a virtual image?
7. The rates of vibration of two tuning forks are respectively 200 and 205. If they sound together, how many beats will be produced per second?
8. Draw a rough diagram representing the lines of magnetic force in the neighborhood of a short bar magnet.

9. Name three important properties of an electric conduction current.

10. State Joule's law.

English Literature and Rhetoric—

1. For what is each noted: Caxton, Wyclif, and Chaucer?

2. Put the writings of Bacon and Shakespeare in brief contrast.

3. Say something about the origin of the English drama.

4. Name some of the best known writers of lyric poetry. Name a representative production of each.

5. Mention one production of each that you have read: Pope, Scott, Burns, and Tennyson.

6. To what extent have you studied the literature of our own country?

7. Define rhetoric, figure of speech, style, and argumentation.

8. What faults must be avoided to secure the unity of a sentence?

9. Give an original, or a quoted, example of each: Metaphor, personification, apostrophe, and hyperbole.

10. Give some practical suggestions regarding "composition writing" in the public schools.

Zoölogy—

1. Name two of the simpler forms of animal life and describe structure.

2. How does a star-fish obtain its food? A clam?

3. What is meant by cold-blooded? Give examples of two classes of cold-blooded animals.

4. Discuss different methods of reproduction in invertebrates, with examples of each.

5. What are the characteristics of insects? Give examples of five of the principal orders.

6. Describe the process of respiration in a fish, a frog, and a bee.

7. Into what classes are vertebrates divided? Give examples of each class.

8. Classify as completely as possible the following: whale, seal, horned-toad, earth-worm, and cray-fish.

9. Define vertebrate, mammal, marsupial, ruminant, and primate.

10. Discuss the difference in location of the nervous system in vertebrates and invertebrates.

SECOND DAY, A. M.

Trigonometry—

1. Define the six goniometrical functions, and give the limits of their variations for a change in the angle from 0° to 90° .

2. If the tan of an angle is 1.2, find the numerical values of the other functions, writing down the equations necessary.

3. Prove that $\sin x = 2 \sin \frac{x}{2} \cos \frac{x}{2}$

$$\sin x = \sqrt{1 - \cos 2x}$$

4. Prove that in a plane triangle the sides are proportioned to sines of the angles opposite those sides.

5. Derive formulæ expressing cosines of the three angles of a plane triangle in terms of the sides.

6. Derive formulæ for the area of a plane triangle when we have given two sides and an included angle (or, as a substitute, given the three sides).

Answer five questions only, omitting any one.

French—

1. Translate into English:

Ce qui se passa jusqu' au petit jour, je n'en sais rien,—les bagages, les blessés et les prisonniers continuèrent sans doute de défiler sur le pont;—mais alors une détonation épouvantable nous éveilla, pas un homme ne resta couché, car on prenait cela pour une attaque, lorsque deux officiers de hussards arrivèrent en criant qu'un fourgon de poudre venait de sauter par hasard dans la grande avenue de Raudstadt, au bord de l'eau. La fumée, d'un rouge sombre, tourbillonnait encore dans le ciel en se dissipant; la terre et les vieilles maisons frémissaient.

Le calme se rétablait. Quelques-uns se recouchèrent pour tâcher de se rendormir; mais le jour venait; en jetant les yeux sur la rivière grisâtre, on voyait déjà nos troupes s'étendre à perte de vue sur les cinq ponts de l'Elster et de la Pleisse qui se suivent à la file, et n'en font pour ainsi dire qu'un. Ce pont, sur lequel tant de milliers d'hommes devaient défiler, vous rendait tout mélancolique. Cela devait prendre beaucoup de temps, et l'idée venait à tout le monde qu'il aurait mieux valu jeter plusieurs ponts sur les deux rivières, puisque d'un instant à l'autre l'ennemi pouvait nous attaquer, et qu'alors la retraite deviendrait bien difficile. Mais l'empereur avait oublié de donner des ordres, et l'on n'osait rien faire sans ordre; pas un maréchal de France n'aurait osé prendre sur lui de dire que deux ponts valaient

mieux qu'un seul! Voilà pourtant à quoi la discipline terrible de Napoléon avait réduit tous ces vieux capitaines: ils obéissaient comme des machines et ne s'inquiétaient de rien autre dans la crainte de déplaire au maître!

2. Give the principal parts of all the irregular verbs which occur in the above passage.

3. Inflect the verb "to be" in the conditional; inflect the verb "to have" in the subjunctive; inflect the verb "to see" in the future.

4. Translate into French:

Have you ever been in Paris? If you have not been there, you ought to go, for it is a very beautiful city, the most beautiful I have ever seen. Five years ago I passed the summer there, and found my sojourn very pleasant. The weather was fine almost always. It was never too hot. Indeed, it is never so hot on the continent of Europe as it often is in America during the summer months. I hope you will have an opportunity to visit the beautiful capital of France during the exposition of 1900.

German—

1. Translate into English:

Nach einer glücklichen, jedoch für mich sehr beschwerlichen Seefahrt erreichten wir endlich den Hafen. Sobald ich mit dem Boote ans Land kam, belud ich mich selbst mit meiner kleinen Habseligkeit, und durch das wimmelnde Volk mich drängend ging ich in das nächste, geringste Haus hinein vor welchem ich ein Schild hängen sah. Ich beehrte ein Zimmer, der Hausknecht mass mich mit einem Blick und führte mich unters Dach. Ich liess mir frisches Wasser geben und genau beschreiben, wo ich den Herrn Thomas John aufzusuchen habe:—vor dem Norderthor, das erste Landhaus zur rechten Hand, ein grosses, neues Haus, von roth und weissem Marmor mit vielen Säulen. Gut.—Es war noch früh an der Zeit, ich schnürte sogleich mein Bündel auf, nahm meinen neu gewandten schwarzen Rock heraus, zog mich reinlich an in meine besten Kleider, steckte das Empfehlungsschreiben zu mir und setzte mich sobalt auf den Weg zu dem Manne, der mir bei meinen descheidenen Hoffnungen förderlich sein sollte. Nachdem ich die lange Norderstrasse hinaufgestiegen und das Thor erreicht, sah ich bald die Säulen durch das Grüne schimmern;—also hier, dachte ich. Ich wischte den Staub von meinen Füßen mit meinem Schnupftuch ab, setzte mein Halstuch in Ordnung und zog in Gottes Namen die Klingel.

Die Thür sprang auf. Auf dem Flur hatt' ich Verhör zu bestehn, der Portier liess mich aber anmelden, und ich hatte die Ehre in den Park gerufen zu werden, wo Herr John mit einer kleinen Gesellschaft sich erging.

2. Give the principal parts of all the verbs in the above passage.

3. Inflect in full the expressions "the good man," "a beautiful woman," "the little book."

4. Translate into German:

Have you ever been in Berlin? Two years ago I was there with my sister. We went to walk every day in the city park, which is especially beautiful in the spring. From there we often wrote letters home, and tried to describe the beauties of that wonderful city, but it was not easy to do, and we often thought how happy we should be, if our parents could be with us. I hope that when I go to Germany again, they can go with me.

SECOND DAY, P. M.

Geometry—

1. The three bisectors of the three angles of a triangle meet in the same point.

2. An angle formed by two secants, intersecting without the circumference, is measured by one-half the difference of the intercepted arcs.

3. Divide a given straight line in extreme and mean ratio.

4. Upon a given straight line, construct a rectangle equivalent to a given rectangle.

5. The diagonals of a regular pentagon intersect each other in extreme and mean ratio.

6. The sum of any two face angles of a triedral angle is greater than the third.

7. In a rectangular parallelopiped, the square of a diagonal is equal to the sum of the squares of the three edges meeting at a common vertex.

8. Define "spherical triangle," "symmetrical triangles," "polar triangle," "spherical excess."

9. The sum of the angles of a spherical triangle is greater than two and less than six right angles.

10. Formulate the volume of a sphere, and indicate the significance of the factors entering into the formula.

Omit three of the first six questions and two of the last four. Answer five.

Chemistry—

1. State the law of Avogadro.
 2. Discuss the formula of water.
 3. What is the function of carbon dioxide in the air?
 4. Describe ammonia, with formula, discussing the volume in relation to the volume of the elements composing it, and giving the reason for that relation.
 5. Write an equation showing the action of hydrochloric acid on binoxide of manganese. Discuss it.
 6. Explain the use and significance of symbols. Explain the use of the parenthesis, coefficient, and subscript.
 7. Discuss the ordinary nomenclature of compounds.
 8. What is the relation between atomic weight and specific heat? What is the explanation of this relation?
 9. Choose a metal, describe it, and some of its important properties.
 10. Choose a non-metal, describe it, and some properties.
- Select five of these questions, answer only the five selected, the examination is upon the basis of five.

General History—

1. What nations engaged in the Punic wars? In the Penoponnesian war?
2. Give the date of the Norman conquest of England. How did Spain come into possession of the "Low Countries"?
3. Name the chief events in the reign of Ferdinand of Aragon. Of Charles V.
4. Make a historical statement about each: Cleopatra, Mary of Burgundy, and Joan of Arc.
5. Say something about Luther and Loyola.
6. What caused the "War of the Roses?" Who, in English history, is known as "The King Maker?"
7. Say something about the execution of Mary Queen of Scots and the defeat of the "Invincible Armada."
8. "The War of the Spanish Succession" and "The War of the Austrian Succession"—what caused these conflicts?
9. What territory has been acquired by the United States since 1800?
10. Who are the Carlists? Who is the present king of Spain? What blood ties bind him to the emperor of Austria?

THIRD DAY, A. M.

Physical Geography. Answer five questions—

1. Give the reasons for the distribution of rainfall in South America; i. e., distribution in space not in time.

You can make this answer more satisfactory by a sketch showing the distribution.

2. Give the reasons for and the time of the wet season (or seasons) in Venezuela. Why do some regions have two wet and two dry seasons annually and others but one of each?

3. Give the reasons for and the time of the wet season (or seasons) in California, also in Palestine.

4. Under what conditions are food-plants formed?

5. Describe the process by which lakes are extinguished: (a) when the inflow is greater than evaporation; (b) when inflow is less than evaporation.

6. Describe the process by which a level plateau is reduced to base-level (or sea-level). (Your answer should show that you would know by looking, whether the process is in its youth, maturity, or well advanced.)

7. What data are shown upon a daily weather map? State what you know of the very general principles which make forecasting possible.

8. What are the principal forces at work in weathering? (Show that you understand something of how each works.)

9. What are the theories for volcanoes that you know? Give evidences for the one which you think most plausible.

Latin—

1. Translate:

Tum demum Liscus, oratione Caesaris adductus, quod antea tacuerat, proponit: 'Esse nonnullos, quorum auctoritas apud plebem plurimum valeat, qui privatim plus possint, quam ipsi magistratus. Si jam principatum Gallie obtinere non possint, Gallorum quam Romanorum imperia preferre, neque dubitare, quin, si Helvetios superaverint Romani, una cum reliqua Gallia Aeduis liberatem sinterepturi. Ab iisdem nostra consilia, quæque in castris gerantur, hostibus enunciarî; hos a se coerceri non posse: quin etiam, quod necessario rem coactus Cæsari enunciarit, intelligere sese, quanto id cum periculo fecerit, et ob eam causam, quam diu potuerit, tacuisse.'

2. Translate into Latin:

"For many reasons Cæsar decided that his army should be taken across the Rhine. After he had spent eighteen days in

all over the Rhine he led his army back and ordered the bridge to be destroyed. Since a small portion of the summer remained, he decided to cross over into Britain in order to see what sort of people they were and what kind of warfare they practiced."

3. Translate:

"Tempus erat, quo prima quies mortalibus ægris
incipit, et dono divom gratissima serpit.
In somnis, ecce, ante oculos maestissimus Hector
visus adesse mihi, largosque effundere fletus,
raptatus bigis, ut quondam, aterque cruento
pulvere, perque pedes traiectus lora tumentis.
Ei mihi, qualis erat, quantum mutatus ab illo
Hectore, qui redit exuvias indutus Achilli,
vel Danaum Phrygios iaculatus puppibus ignis,
squalentem barbam et concretos sanguine crinis
volneraque illa gerens, quæ circum plurima muros
accepit patros. Ultro dens ipse videbar
compellare virum et maestas expromere voces."

4. Give the construction of the words: mortalibus, effundere, pulvere, pedes and sanguine in the foregoing.

5. Mark the scansion in lines 3 to 7.

Logic—

1. Define: a concept, term, proposition, a thought, an argument and a syllogism.

2. Construct a syllogism illustrative of the second figure.

3. What is the educational value of a study of logic?

4. What is Aristotle's dictum?

5. Take any piece of composition, stanza of poem, paragraph of literature and give a logical analysis of it—convert it into the syllogism.

Pedagogy—

1. Give the psychology of the "Speer Method."

2. Why has nature a great influence upon the mind?

3. What is the effect of art training upon the character of the individual?

4. How would you proceed to develop the art sentiment in a child?

5. Give the psychology of school government.

Psychology—

1. Discuss the structure and function of nerve cells.

2. In accordance with physiological psychology, what is the physical basis of association of ideas?

3. What do you understand by genetic psychology?
4. Give the psychology of the culture epochs.
5. Give the physiology and psychology of fatigue.

THIRD DAY, P. M.

Physiology—

1. What is the composition of bone?
2. Describe mastication, digestion, and absorption of a piece of beefsteak and a slice of bread and butter.
3. What is chyle? What is lymph?
4. Trace the blood in its course from the right auricle back again to the same point.
5. Give the life history of the red blood corpuscle.
6. What is found in air exhaled from the lungs?
7. How do you determine that the air supply, in a crowded room, is insufficient?
8. How near the eyes should a book of ordinary clear type be held when reading?
9. How are sounds produced, and why are some musical?
10. What are some of the causes of defective hearing?

Geology and Mineralogy—

1. Define granite and either trap or basalt.
2. Name the minerals, each of which forms by itself extensive rock masses.
3. Give all the proofs you can of the former existence of a glacier where none now exists.
4. Give the principal coal fields in the United States, and the geological age to which they belong.
5. Name the geological ages respectively characterized by the following fossils: Trilobite, Orthoceras, Ammonite, Lepidodendrids.

Astronomy—

1. What is meant by the term sidereal day?
2. Mention some method of proving that the earth is really rotating about an axis.
3. What is the cause of the tides?
4. State Kepler's laws.
5. How do we know that the chemical element, hydrogen, is present in the sun?

6. Name the planets in order according to their distances from the sun. Which of them, so far as known, are attended by satellites?

7. State briefly how Neptune was discovered.

8. In addition to the planets, what other bodies revolve about the sun?

KINDERGARTEN WORK.

A bill for an act giving power to the school board of any district to establish and maintain free kindergartens for the instruction of children between three and six years of age.

Be it enacted by the General Assembly of the State of Colorado:

Section 1. The school board of any school district in the state shall have power to establish and maintain free kindergartens in connection with such school district, for the instruction of children between three and six years of age, residing in said district, and shall establish such courses of training, study and discipline and such rules and regulations governing such preparatory or kindergarten schools as said board may deem best; Provided, That nothing in this act shall be construed to change the law relating to the taking of the census of the school population or the apportionment of state and county school funds among the several counties and districts in this state; Provided further, That the cost of establishing and maintaining such kindergartens shall be paid from the special school fund of said districts, and the said kindergartens shall be a part of the public school system and governed as far as practicable in the same manner and by the same officers as is now, or hereafter may be provided by law for the government of the other public schools of this state; Provided further, That teachers of kindergarten schools shall have diplomas from some reputable kindergarten teacher's institute, or pass such examination on kindergarten work as the kindergarten department of the State Normal School may direct.

Sec. 2. Whereas, In the opinion of the general assembly an emergency exists; therefore this act shall take effect from and after its passage.

By a careful reading of the bill you will find:

1. That any school district in the state has the right to establish and maintain kindergarten work.

2. That children of kindergarten age cannot draw any portion of the public school fund. Hence there will be no change in apportioning the general funds.

3. Kindergartens must be maintained from the special school fund. If you intend to maintain this work it would be well to look after the increasing of the special fund by voting a larger special tax.

4. The work of the kindergarten shall be a part of the public school system and shall be governed by the school directors.

5. Applicants to teach must be graduates of some reputable kindergarten institute or pass such examination as kindergarten department of the State Normal School may direct.

•

STATE KINDERGARTEN EXAMINATION, AUGUST
25, 26, 1897.

PERSONAL QUESTIONS.

1. Name and address.....
.....
2. Age
3. General education
4. Special kindergarten training.....
.....
5. Do you hold a kindergarten diploma?.....From what
institution?
6. How long have you taught kindergarten?.....
7. Have you ever taught other subjects?.....
How long?
8. Give as complete a list as possible of all books or articles
upon child training or in any way related to kindergarten
work which you have read.
.....
.....
.....

FIRST DAY, A. M.

Froebel—

1. Name Froebel's writings and give an idea of their contents and educational value.
2. Write a thesis on Froebel's educational ideals, showing his relation to other great men of his times, and also his position as regards the later development in child study.

Kindergarten Management—

1. What place does the weaving occupy in the kindergarten programme? How fine and what style of mats do you give the children? Give reasons.
 2. What material would you need for a kindergarten of twenty-five children?
 3. Estimate the cost, exclusive of room rent and heat.
 4. Make an ideal programme in nature work for one year.
-

FIRST DAY, P. M.

The Mother Play Book—

1. Explain the general purpose of this book and show its educational value.
2. Select two plays which are respectively indicative of the child's love for plants and animals and give the proper interpretation to each.
3. In which of the plays does Froebel indicate the analogy between the mind of the child and that of primitive men as regards celestial phenomena? Explain the same.
4. Interpret as fully as possible the two plays.
 - (a) "This is the mother kind and dear."
 - (b) "The Carpenter."

Nature Study—

1. What is the child's instinctive attitude toward nature?
 2. How does it compare with that of primitive man?
 3. What has been the trouble with much of our so-called nature study (science work) in kindergarten and school?
 4. What position should nature study hold in the kindergarten?
 5. What are your ideas as to methods of teaching this subject in the kindergarten?
-

SECOND DAY, A. M.

Stories, Songs and Games—

1. Name some of the best story writers for children, and give their books.
2. What are some of the essential features of a good story for children?
3. Should children sing when engaged in active exercises? Give reasons.

4. Who are some of the best song writers for children? State the good features of their work.

5. Write a short thesis on the kindergarten games, observing the following points:

(a) Their all-sided educational value.

(b) Their relation to nature study.

(c) Their place in the kindergarten daily programme.

6. Show the analogy in the development of the child and the race in these subjects.

Gifts and Occupations—

1. Should the Froebel system of drawing be used in the kindergarten? Give reasons for or against.

2. How finely should the sewing cards be perforated? (Distance between perforations.) Give physiological basis for your answer.

3. What do you think of the proposed enlargement of the building gifts? Upon what law of motor activity is this enlargement based?

4. Explain the symbolism of the second gift, and show whether it properly has a place with children of the kindergarten age, or whether it belongs to a later stage of child training.

SECOND DAY, P. M.

Psychology—

1. What do you understand by a nerve center?

2. In what way is education connected with nerve centers?

3. In the motor activities distinguish between the central and the peripheral centers.

4. What is the practical application of number three in the kindergarten?

5. Give the psychology of fatigue.

History of Education—

1. Who was Rosmini, and what was his method in education?

2. In what respect were Herbart and Beneke alike in their educational doctrine?

3. Name some of the principles of Ratich.

4. What do you understand by a system of education?

5. What effect has the kindergarten had upon education in general?

Philosophy of Education—

1. What types of experiences do you find in an individual?
2. What are the culture epochs? Give a reason for their existence.
3. What do you understand by heredity? habit? accommodation.
4. Give a reason for a training of the motor activities in connection with the mental.

COUNTY SUPERINTENDENTS OF SCHOOLS.

1896-1898.

Arapahoe—Mrs. Thalia A. Rhoads, Denver.
 Archuleta—F. A. Byrne, Pagosa Springs.
 Baca—Mrs. Mary E. Cole, Springfield.
 Bent—Geo. E. McCauley, Las Animas.
 Boulder—G. L. Harding, Boulder.
 Chaffee—John L. Kilgore, Buena Vista.
 Cheyenne—J. W. Tuller, Cheyenne Wells.
 Clear Creek—A. E. Barker, Idaho Springs.
 Conejos—G. W. Irwin, Conejos.
 Costilla—W. H. Terry, Mosca.
 Custer—J. W. Scott, Westcliffe.
 Delta—Ella New, Delta.
 Dolores—Mrs. Louisa Pitt Yocum, Rico.
 Douglas—Frank D. Ball, Castle Rock.
 Eagle—James Dilts, Eagle.
 Elbert—Annie C. Willard, Kiowa.
 El Paso—L. B. Grafton, Colorado Springs.
 Fremont—Alfred Durfee, Cañon City.
 Garfield—Aradell White, Glenwood Springs.
 Gilpin—Helen Grenfell, Central City.
 Grand—Lizzie Sullivan, Hot Sulphur Springs.
 Gunnison—S. M. Logan, Gunnison.
 Hinsdale—Nettie Whitmore, Lake City.
 Huerfano—Jennie C. Creese, Walsenburg.
 Jefferson—J. W. Arasmith, Golden.
 Kiowa—Emma O. Liggett, Sheridan Lake.
 Kit Carson—Susie E. Morgan, Burlington.
 Lake—Anna K. Page, Leadville.
 La Plata—James R. Durnell, Durango.
 Larimer—Henrietta Wilson, Fort Collins.

Las Animas—W. R. Smethers, Trinidad.
Lincoln—Harriet L. Dunaway, Hugo.
Logan—John C. Aiken, Sterling.
Mesa—Elizabeth Walker, Grand Junction.
Mineral—Ella Henry, Amethyst.
Montezuma—A. Liucolu Fellows, Cortez.
Montrose—Alice M. Catlin, Montrose.
Morgan—Aunie E. Garver, Fort Morgan.
Otero—M. E. Biggs, La Juuta.
Ouray—Isabel L. Moore, Ouray.
Park—Sadie H. Maxcy, Fairplay.
Phillips—S. H. Johuson, Holyoke.
Pitkin—Edward M. Scanlan, Aspen.
Powers—Geo. T. Feast, Lamar.
Pueblo—Chas. W. Bowman, Pueblo.
Rio Blanco—W. H. Young, Meeker.
Rio Graude—Clarkson A. Pound, Moute Vista.
Routt—Emma H. Peck, Craig.
Saguache—D. S. Jones, Pruden.
San Juan—Ellen Carbis, Silverton.
San Miguel—H. C. Lay, Telluride.
Sedgwick—Cuthbert F. Parker, Julesburg.
Summit—Jennie M. Jones, Breckeuridge.
Washington—Lou A. Bagley, Akron.
Weld—Oliver Howard, Greeley.
Yuma—C. E. Ware, Yuma.

1898-1900.

Arapahoe—Warren E. Knapp, Denver.
Archuleta—Barzillai Price, Pagosa Springs.
Baca—Elizabeth R. Shannon, Springfield.
Bent—George E. McCauley, Las Animas.
Boulder—George L. Hardiug, Boulder.
Chaffee—Johu S. Kilgore, Buena Vista.
Cheyenne—J. W. Tullis, Cheyenne Wells.
Clear Creek—Martha A. Bowman, Georgetown.
Conejos—George W. Irwiu, Conejos.
Costilla—Charles Groenendyke, Sau Luis.
Custer—A. P. Dickson, Westcliffe.
Delta—Merge J. Browne, Delta.
Dolores—Percy S. Rider, Rico.
Douglas—Frank D. Ball, Castle Rock.

Eagle—Eva Booco, Redcliff.
 Elbert—Annie C. Willard, Kiowa.
 El Paso—Lucretia M. Allen, Colorado Springs.
 Fremont—James Woods, Cañon City.
 Garfield—Aradell White, Glenwood Springs.
 Gilpin—Helen L. Grenfell, Central City.
 Grand—Lizzie Sullivan, Hot Sulphur Springs.
 Gunnison—Mary E. Williams, Gunnison.
 Hinsdale—Nettie Whitmore, Lake City.
 Huerfano—Fannie Quillian, Walsenburg.
 Jefferson—Clyde O. Secrest, Golden.
 Kiowa—Horace A. Long, Sheridan Lake.
 Kit Carson—H. E. Carmichael, Burlington.
 Lake—Lizzie W. Jones, Leadville.
 La Plata—James R. Durnell, Durango.
 Larimer—Henrietta Wilson, Fort Collins.
 Las Animas—Michael Beshoar, Trinidad.
 Lincoln—Emmett I. Thompson, Hugo.
 Logan—John C. Aikin, Sterling.
 Mesa—Elizabeth Walker, Grand Junction.
 Mineral—Laura Pollock, Amethyst.
 Montezuma—William Halls, Cortez.
 Montrose—Alice M. Catlin, Montrose.
 Morgan—Fay E. Williams, Fort Morgan.
 Otero—Mary J. Anderson, La Junta.
 Ouray—Isabel L. Moore, Ouray.
 Park—Sadie H. Maxcy, Fairplay.
 Phillips—S. H. Johnson, Holyoke.
 Pitkin—Edward M. Scaulan, Aspen.
 Prowers—David Barnes, Lamar.
 Pueblo—Lois J. Shepherd, Pueblo.
 Rio Blanco—W. H. Young, Meeker.
 Rio Grande—George A. Carpenter, Del Norte.
 Routt—Adelia S. F. Barnard, Hahn's Peak.
 Saguache—D. S. Jones, Saguache.
 San Juan—Ellen Carbis, Silverton.
 San Miguel—H. C. Lay, Telluride.
 Sedgwick—Cuthbert F. Parker, Julesburg.
 Summit—Lilian Colcord, Breckenridge.
 Washington—Ella E. Garfield, Akron.
 Weld—J. E. Snook, Greeley.
 Yuma—C. E. Ware, Yuma.

Normal District Institutes

Normal District Institutes and Executive Committees,
1897 and 1898.

Normal Institute Certificates issued in 1897 and 1898.

District Normal Institute Reports, 1897 and 1898.

NORMAL DISTRICT INSTITUTES.

1897.

- District 1. July 19-30, Fort Morgan.
August 2-13, Julesburg.
- District 2. August 9-20, Greeley.
- District 3. July 19-30, Denver.
- District 4. August 9-18, Golden.
- District 5. August 9-20, Colorado Springs.
- District 6. August 9-20, Burlington.
July 26-August 7, Hugo.
- District 7. August 2-13, Cañon City.
- District 8. August 2-13, La Junta.
- District 9. August 9-20, Walsenburg.
August 9-19, Trinidad.
- District 10. August 9-21, Monte Vista.
- District 11.
- District 12. August 2-13, Ouray.
- District 13. June 28 (three weeks), Salida.
June 14-25, Aspen.
-

1898.

- District 1. July 18-29, Holyoke.
- District 2. August 8-19, Boulder.
- District 3. August 1-12, Denver.
- District 4. August 8-19, Golden.
- District 5. August 22-September 2, Colorado Springs.
- District 6. August 22-September 1, Burlington.
- District 7. August 1-12, Cañon City.
- District 8. August 3-17, Lamar.
- District 9. August 8-18, Trinidad.

District 10. August 8-18, Del Norte.

District 11.

District 12. August 1-12, Delta.

District 13. August 1-12, Glenwood Springs.

EXECUTIVE COMMITTEES, NORMAL DISTRICTS.

1897.

No. 1—Cuthbert E. Parker, Julesburg, Sedgwick; C. E. Ware, Yuma, Yuma; Annie E. Garver, Fort Morgan, Morgan.

No. 2—George L. Harding, Boulder, Boulder; Oliver Howard, Greeley, Weld; Henrietta Wilson, Fort Collins, Larimer.

No. 4—Helen L. Grenfell, Central City, Gilpin; A. E. Barker, Idaho Springs, Clear Creek; J. W. Arasmith, Golden, Jefferson.

No. 5—Annie C. Willard, Kiowa, Elbert; L. B. Grafton, Colorado Springs, El Paso; Frank D. Ball, Castle Rock, Douglas.

No. 6—Harriet L. Dunaway, Hugo, Lincoln; Susie E. Morgan, Burlington, Kit Carson; J. W. Tullis, Cheyenne Wells, Cheyenne.

No. 7—J. W. Scott, Westcliffe, Custer; Alfred Durfee, Cañon City, Fremont; C. W. Bowman, Pueblo, Pueblo.

No. 8—M. E. Biggs, La Junta, Otero; Emma O. Liggett, Sheridan Lake, Kiowa; Geo. E. McCauley, Las Animas, Bent.

No. 9—W. R. Smethers, Trinidad, Las Animas; Jennie C. Creesy, Walsenburg, Huerfano.

No. 10—D. S. Jones, Pruden, Saguache; C. A. Pound, Monte Vista, Rio Grande; Geo. W. Irvin, Conejos, Conejos.

No. 11—J. R. Durnell, Durango, La Plata; A. L. Fellows, Cortez, Montezuma; Louisa P. Yocum, Rico, Dolores.

No. 12—Isabel L. Moore, Ouray, Ouray; Elizabeth Walker, Grand Junction, Mesa; Ella New, Delta, Delta.

No. 13—E. M. Scanlan, Aspen, Pitkin; J. S. Kilgore, Buena Vista, Chaffee; Anna K. Page, Leadville, Lake.

1898.

No. 1—President, C. F. Parker, Julesburg, Sedgwick; secretary, C. E. Ware, Yuma, Yuma; treasurer, S. H. Johnson, Holyoke, Phillips.

No. 2—President, Henrietta Wilson, Fort Collins, Larimer; secretary, G. L. Harding, Boulder, Boulder; treasurer, J. E. Snook, Greeley, Weld.

No. 3—W. E. Knapp, Denver, Arapahoe.

No. 4—President, Helen H. Grenfell, Central City, Gilpin; secretary, C. O. Secrest, Golden, Jefferson; treasurer Martha A. Bowman, Idaho Springs, Clear Creek.

No. 5—President, Lucretia M. Allen, Colorado Springs, El Paso; secretary, Frank D. Ball, Castle Rock, Douglas; treasurer, Annie C. Willard, Kiowa, Elbert.

No. 6—President, J. W. Tuller, Cheyenne Wells, Cheyenne; secretary, E. I. Thompson, Hugo, Lincoln; treasurer, H. E. Carmichael, Burlington, Kit Carson.

No. 7—President, J. W. Scott, Westcliffe, Custer; secretary, James Woods, Cañon City, Fremont; treasurer, Lois J. Shepherd, Pueblo, Pueblo.

No. 8—President, H. A. Long, Sheridan Lake, Kiowa; secretary, Mary J. Anderson, La Junta, Otero; treasurer, David Barnes, Lamar, Prowers.

No. 9—President, Michael Beshoar, Trinidad, Las Animas; secretary, Fannie Quillian, Walsenburg, Huerfano.

No. 10—President, G. A. Carpenter, Del Norte, Rio Grande; secretary, Charles Groenendyke, Garnett, Costilla; treasurer, D. S. Jones, Saguache, Saguache.

No. 11—President, James R. Durnell, Durango, La Plata; secretary, Percy S. Rider, Rico, Dolores; treasurer, William Halls, Cortez, Montezuma.

No. 12—President, Isabel L. Moore, Ouray, Ouray; secretary, H. C. Lay, Telluride, San Miguel; treasurer, Merge J. Browne, Delta, Delta.

No. 13—President, John S. Kilgore, Buena Vista, Chaffee; secretary, E. M. Scanlan, Aspen, Pitkin; treasurer, Sadie H. Maxcy, Fairplay, Park.

NORMAL INSTITUTE CERTIFICATES ISSUED.

1897.

J. W. Bowhis.
 J. R. Morgan.
 M. F. Miller.
 Lucy Silke.
 Mathilde Coffin.
 W. H. Miller.
 P. K. Pattison.
 R. W. Rolfe.
 Ivy G. Loar.
 Mattie J. Atkins.
 F. M. Wallace.
 Esther D. Hunt.
 Wesley W. Putnam.
 F. H. Clark.
 Elizabeth J. Thompson.
 John B. Morgan.
 Cornelia Miles.
 F. L. Abbott.
 Gertrude Van Hoesen.
 Helen C. Dresser.
 Lizzie R. Young.
 Blanche A. Starks.
 F. F. Case.
 Allis B. Hawker.
 E. G. Kepner.
 G. E. Roosevelt.
 Thalia A. Rhoads.

1898.

Chauncey F. Bell.
D. C. Cagwin.
Sarah C. Brooks.
Helene V. Johnson.
E. M. Cunningham.
J. W. Ellison.
E. G. Lancaster.
F. L. Farnsworth.
W. O. Meier.
Ruby M. Clark.
Lillian Newland.
Mary McDonald.
S. Marion Becker.
E. McC. Mulholland.
Adelaide Wheatley.
Esther D. Hunt.
J. H. Allen.
Fordyce P. Cleaves.
Geo. L. Cannon, Jr.
Ed. F. Hermanns.
W. J. Whiteman.
Reuben M. Streeter.
Miss Emma J. Harris.
Warren E. Knapp.
Aaron Gove.
L. C. Greenlee.
James H. Van Sickle.
Homer S. Phillips.
E. R. Jones.

DISTRICT NORMAL INSTITUTE REPORTS.

 1897.

FIRST DISTRICT.

Held at Fort Morgan and Julesburg, July 19-August 13.

Conductor—W. W. Remington.

Instructors—W. F. Bybee and Mary Mack.

Enrollment—113.

Financial Statement—

Receipts—

From counties.....	\$222 00
From registration fees.....	113 00
From other sources.....	61 75
Total	\$396 75

Disbursements—

Paid conductor.....	\$135 00
Paid instructors.....	200 00
Paid incidentals.....	61 75
Total	\$396 75

SECOND DISTRICT.

Held at Greeley, August 9-21.

Conductor—N. M. Fenneman.

Instructors—Helen Dresser, W. W. Putnam, G. L. Harding, Madeline Kennedy, Joseph F. Daniels, Henrietta Wilson, Oliver Howard.

Enrollment—127.

Financial Statement—

Receipts—

Amount on hand.....	\$ 34 53
From counties.....	210 00
From registration fees.....	127 00
From other sources.....	2 00
Total	<u>\$373 53</u>

Disbursements—

Paid conductor.....	\$100 00
Paid instructors.....	182 00
Paid incidentals.....	63 30
	<u>\$345 30</u>
Balance on hand.....	28 23
Total	<u>\$373 53</u>

THIRD DISTRICT.

Held at Denver, July 19-30.

Conductor—Thalia A. Rhoads.

Instructors—Ira M. DeLong, Fred Dick, J. H. Hays, G. F. Roosevelt, E. G. Kepner, Gertrude Van Hosen.

Enrollment—340.

Financial Statement—

Receipts—

Balance on hand.....	\$ 251 50
From registration fees.....	340 00
From Arapahoe county.....	680 00
Total	<u>\$1,271 50</u>

Disbursements—

Paid conductor.....	\$ 50 00
Paid instructors.....	820 00
Paid incidentals.....	206 00
Total	<u>\$1,076 00</u>
Balance on hand.....	195 50
Total	<u>\$1,271 50</u>

FOURTH DISTRICT.

Held at Golden, August 9-20.

Conductor—M. F. Miller.

Instructors—Celia F. Osgood, F. J. Francis, J. W. Arasmith.

Enrollment—104.

Financial Statement—

Receipts—

Balance on hand.....	\$ 39 48
From counties.....	208 00
From registration fees.....	104 00
Total	<u>\$351 48</u>

Disbursements—

Paid conductor.....	\$112 50
Paid instructors.....	112 50
Paid incidentals.....	81 92
Total	<u>\$306 92</u>
Balance on hand.....	44 56
Total	<u>\$351 48</u>

FIFTH DISTRICT.

Held at Colorado Springs, August 9-21.

Conductor—L. B. Grafton.

Instructors—W. H. Miller, Ira M. DeLong, Mathilde Coffin,
Lucy Silke, Frank D. Ball.

Enrollment—312.

Financial Statement—

Receipts—

Balance on hand.....	\$ 188 83
From counties.....	624 00
From Registration fees.....	312 00
Total	<u>\$1,124 83</u>

Disbursements—

Paid instructors.....	\$ 807 05
Paid incidentals.....	90 15
Total	<u>\$ 897 20</u>
Balance on hand.....	227 63
Total	<u>\$1,124 83</u>

SIXTH DISTRICT.

Held at Burlington, August 9-20.

Conductor—Cree T. Work.

Instructors—Minnie M. Van Pelt.

Enrollment—61.

Financial Statement—

Receipts—

Balance on hand.....	\$ 34 67
From counties.....	96 00
From registration fees.....	61 00
From other sources.....	2 00
Total	<u>\$193 67</u>

Disbursements—

Paid conductor.....	\$ 80 00
Paid instructor.....	60 00
Paid incidentals.....	13 00
Total	<u>\$153 00</u>
Balance on hand.....	40 67
Total	<u>\$193 67</u>

SIXTH DISTRICT.

Held at Hugo, July 26-August 20.

Conductor—W. E. Knapp.

Instructors—Gertrude Van Hoesen, Charlotte Godsmen.

Enrollment—85.

Financial Statement—

Receipts—

From counties.....	\$136 00
From registration fees.....	85 00
From other sources.....	132 23
Total	<u>\$353 23</u>

Disbursements—

Paid conductor.....	\$171 00
Paid instructors.....	141 35
Paid incidentals.....	28 30
Total	<u>\$340 65</u>
Balance on hand.....	12 58
Total	<u>\$353 23</u>

District No. 6 held two institutes during 1897.

SEVENTH DISTRICT.

Held at Cañon City, August 2-13.

Conductor—J. F. Keating.

Instructors—J. H. Allen, W. A. Hunt, and Alfred Durfee.

Enrollment—112.

Financial Statement—

Receipts—

Balance on hand.....	\$ 10 00
From counties.....	232 00
From registration fees.....	112 00
From other sources.....	1 16
Total	<u>\$355 16</u>

Disbursements—

Paid conductor.....	\$125 16
Paid instructors.....	144 26
Paid incidentals.....	26 32
Total	<u>\$295 74</u>
Balance on hand.....	59 42
Total	<u>\$355 16</u>

EIGHTH DISTRICT.

Held at La Junta, August 16-27.

Conductor—Edwin G. Dexter.

Instructor—Susie Rider.

Enrollment—No report.

Financial Statement—No report.

NINTH DISTRICT.

Held at Trinidad, August 9-27.

Conductor, Mr. Rolfe.

Instructors—W. R. Smethers, Sue Eastman.

Enrollment—58.

Financial Statement—

Receipts—

From counties.....	\$116 00
From registration fees.....	58 00
Total	\$174 00

Disbursements—

Paid conductor and instructors.....	\$174 00
Total	\$174 00

NINTH DISTRICT.

Held at Walsenburg, August 9-20.

Conductor—J. M. Hamer.

Instructors—R. M. Streeter, Jennie C. Creesy, Cora C. Gossin.

Enrollment—45.

Financial Statement—

Receipts—

Balance on hand.....	\$ 3 50
From counties.....	80 00
From registration fees.....	45 00
Total	\$128 50

Disbursements—

Paid conductor.....	\$ 60 00
Paid instructors.....	60 00
Paid incidentals.....	5 00
Total	\$125 00
Balance on hand.....	3 50
Total	\$128 50

District No. 9 held two institutes during 1897.

TENTH DISTRICT.

Held at Monte Vista, August 9-20.

Conductor—A. J. Fynn.

Instructors—Tilman Jenkins, H. H. Wilson, Omie Stephenson,
Mary McDonald.

Enrollment—No report.

Financial Statement—No report.

ELEVENTH DISTRICT.

No institute held during 1897.

TWELFTH DISTRICT.

Held at Ouray, August 2-13.

Conductor—A. B. Copeland.

Instructors—M. I. Ellis, Merge J. Browne, Alice Royce.

Enrollment—68.

Financial Statement—

Receipts—

From counties.....	\$138 00
From registration fees.....	68 00
Total	<u>\$206 00</u>

Disbursements—

Paid conductor.....	\$100 00
Paid instructors.....	80 00
Paid incidentals.....	17 00
Total	<u>\$197 00</u>
Balance on hand.....	9 00
Total	<u>\$206 00</u>

THIRTEENTH DISTRICT.

Held at Salida and Aspen, June 14-July 23.

Conductors—J. F. Keating and F. H. Clark.

Instructors—J. F. Brownscombe, Otto Barth, Alice Hawker.

Enrollment—85.

Financial Statement—

Receipts—

Amount on hand.....	\$179 00
From counties.....	286 00
From registration fees.....	85 00
From other sources.....	75 00
Total	<u>\$625 00</u>

Disbursements—

Paid conductors.....	\$214 50
Paid instructors.....	125 00
Paid incidentals.....	50 00
Total	<u>\$389 50</u>
Balance on hand.....	235 50
Total	<u>\$625 00</u>

Due conductors and instructors, \$235 50.

1898.

FIRST DISTRICT.

Held at Holyoke, July 18-29.

Conductor—B. D. Parker.

Instructors—E. M. Cunningham, M. Nora Boylan.

Enrollment—66.

Financial Statement—

Receipts—

From counties.....	\$132 00
From registration fees.....	66 00
From other sources.....	41 15
Total	<u>\$239 15</u>

Disbursements—

Paid conductor.....	\$100 00
Paid instructors.....	100 00
Paid incidentals.....	39 15
Total	<u>\$239 15</u>

Bills outstanding, \$17.45.

SECOND DISTRICT.

Held at Boulder, August 8-19.

Conductor—Ira M. DeLong.

Instructors—N. M. Fenneman, Laura E. Tefft, F. L. Mosely,
E. W. Elder, Jean Belsher, Miss Jordan.

Enrollment—145.

Financial Statement—

Receipts—

Balance on hand.....	\$ 74 03
From counties.....	290 00
From registration fees.....	145 00
Total	\$509 03

Disbursements—

Paid conductor.....	\$125 00
Paid instructors.....	209 00
Paid incidentals.....	56 72
Total	\$390 72
Balance on hand.....	118 31
Total	\$509 03

THIRD DISTRICT.

Eleventh annual session held at Denver, August 1-12, 1898.

Executive Committee—Hon. Grace Espy Patton-Cowles, state superintendent of public instruction; Dr. Z. X. Snyder, president State Normal School; Warren E. Knapp, superintendent of schools, Arapahoe county. Secretary of committee, Warren E. Knapp.

Conductor—Warren E. Knapp, superintendent of schools, Arapahoe county.

Instructors—Ed. F. Hermanns, principal West Side high school, Denver, psychology, pedagogy, mathematics; N. M. Fenneman, State Normal School, geography, child study, nature study; Miss Emma J. Harris, assistant principal, Franklin school, Denver, drawing, grammar; Miss Gertrude Van Hoesen, critic teacher, Chicago Normal School, primary methods, elementary nature study; Geo. L. Cannon, East Side high school,

Denver, zoology, physiology; Fordyce P. Cleaves, Denver Normal School, physical culture, reading; Wilberforce J. Whiteman, supervisor of music, District No. 2, Denver, methods and practice in vocal music; Homer S. Phillips, principal Logan school, Denver, United States history, civics, Colorado school law.

Lecturers—Hon. Grace Espy Patton-Cowles, state superintendent of public instruction; Dr. Arthur Allin, State University; President Z. X. Snyder, State Normal School; Chancellor Wm. F. McDowell, Denver University; Superintendent Aaron Gove, East Side schools, Denver; Superintendent L. C. Greenlee, West Side schools, Denver; Superintendent James H. Van Sickle, North Side schools, Denver; Mrs. Jean Sherwood, Chicago Woman's club.

Programme—Forenoon.

8:40—Roll-call, secretary: announcements, conductor.

9:00—Arithmetic, Hermanns, auditorium; geography or nature study, Fenneman, room 1; drawing or grammar, Miss Harris, art room.

9:35—Arithmetic, Hermanns, auditorium; geography or nature study, Fenneman, room 1; drawing or grammar, Miss Harris, art room.

10:10—Arithmetic, Hermanns, auditorium; geography or nature study, Fenneman, room 1; drawing or grammar, Miss Harris, art room; primary work, Miss Van Hoesen, room 4; school law, Phillips, second week, art room.

10:40—Recess.

10:55—Pedagogy, Hermanns, auditorium; primary work room 1, Miss Van Hoesen; zoology, Cannon, first week, art room; United States history, Phillips, second week, art room.

11:30—Pedagogy, Hermanns, auditorium; primary work room 1, Miss Van Hoesen; physiology, Cannon, first week, art room; civics, Phillips, second week, art room.

Afternoon.

1:40—Music, Whiteman, auditorium; physical culture or reading, Cleaves, room 1.

2:15—Music, Whiteman, auditorium; physical culture or reading, Cleaves, room 1.

2:50—Lectures daily in auditorium. Institute in a body. Announced on each previous day at roll-call, and on bulletin in lower main hall.

Enrollment—399.

Financial Statement—

Receipts—

Amount on hand.....	\$ 195 50
From Arapahoe county.....	802 00
From registration fees.....	401 00
Total	<u>\$1,398 50</u>

Disbursements—

Paid instructors.....	\$ 997 50
Paid incidentals.....	250 50
Total	<u>\$1,248 00</u>
Balance on hand.....	150 50
Total	<u>\$1,398 50</u>

THIRTEENTH DISTRICT.

Held at Glenwood Springs, August 1-12.

Conductor—Frank H. Clark.

Instructor—M. Nora Boylan.

Enrollment—72.

Financial Statement—

Receipts—

From counties.....	\$144 00
From registration fees.....	72 00
From other sources.....	50 00
Total	<u>\$266 00</u>

Disbursements—

Paid conductor.....	\$ 60 00
Paid instructor.....	37 50
Paid incidentals.....	16 25
Total	<u>\$113 75</u>
Balance on hand.....	152 25
Total	<u>\$266 00</u>

Bills unpaid, \$80.

FOURTH DISTRICT.

Held at Golden, August 8-19.

Conductor—D. R. Hatch.

Instructors—Edwin G. Dexter, Minnie Van Pelt, Miss Foster.

Enrollment—108.

Financial Statement—

Receipts—

From counties.....	\$216 00
From registration fees.....	108 00
From other sources.....	44 56
Total	<u>\$368 56</u>

Disbursements—

Paid conductor.....	\$100 00
Paid instructors.....	150 00
Paid incidentals.....	59 15
Total	<u>\$309 15</u>
Balance on hand.....	59 41
Total	<u>\$368 56</u>

Bills outstanding, \$22.00.

FIFTH DISTRICT.

Held at Colorado Springs, August 22-September 2.

Conductor—Frank D. Ball.

Instructors—Sarah C. Brooks, Georgia McManis, Miss Lowry.

June Foster, W. H. Miller, Edwin G. Dexter, W. H. Halle.

Enrollment—182.

Financial Statement—

Receipts—

Amount on hand.....	\$127 00
From counties.....	46 00
From registration fees.....	182 00
From other sources.....	447 00
Total	<u>\$802 00</u>

Disbursements—

Paid conductor.....	\$ 50 00
Paid instructors.....	610 00
Paid incidentals.....	75 00
Total	<u>\$735 00</u>
Balance on hand.....	67 00
Total	<u>\$802 00</u>
Bills outstanding, \$21.00.	

SEVENTH DISTRICT.

Held at Cañon City, August 1-12.

Conductor—J. F. Keating.

Instructors—J. H. Allen, W. S. Glass, Daniel Ward, O. W. Meier.

Enrollment—136.

Financial Statement—

Receipts—

From counties.....	\$258 00
From registration fees.....	136 00
From other sources.....	46 30
Total	<u>\$440 30</u>

Disbursements—

Paid conductor.....	\$125 00
Paid instructors.....	195 00
Paid incidentals.....	27 60
Total	<u>\$347 60</u>
Balance on hand.....	92 70
Total	<u>\$440 30</u>

EIGHTH DISTRICT.

Held at Lamar, August 3-17.

Conductor—E. R. Jones.

Instructors—Mary S. Mack, F. L. Abbott.

Enrollment—106.

Financial Statement—

Receipts—

From counties.....	\$170 00
From registration fees.....	106 00
From other sources.....	15 29
Total	<u>\$291 29</u>

Disbursements—

Paid conductor.....	\$ 75 00
Paid instructors.....	123 00
Paid incidentals.....	33 55
Paid outstanding indebtedness, 1893.....	59 19
Total	<u>\$290 74</u>
Balance on hand.....	55 .
Total	<u>\$291 29</u>

NINTH DISTRICT.

Held at Trinidad, August 8-18.

Conductor—J. W. Hamer.

Instructor—Ruby M. Clark.

Enrollment—76.

Financial Statement—

Receipts—

From counties.....	\$152 00
From registration fees.....	76 00
Total	<u>\$228 00</u>

Disbursements—

Paid conductor.....	\$100 00
Paid instructor.....	60 00
Paid incidentals.....	11 00
Total	<u>\$171 00</u>
Balance on hand.....	57 00
Total	<u>\$228 00</u>

TENTH DISTRICT.

Held at Del Norte, August 8-18.

Conductor—H. H. Wilson.

Instructors—M. F. Miller, Myrtie Wells, Geo. A. Carpenter, J. R. Morgan, J. W. Kiger, Charles Groenendyke.

^a Enrollment—77.

Financial Statement—

Receipts—

From counties.....	\$168 00
From registration fees.....	77 00
From other sources.....	104 50
Total	\$349 50

Disbursements—

Paid conductor.....	\$ 60 00
Paid instructors.....	165 00
Paid lecturer.....	50 00
Paid incidentals.....	51 05
Total	\$326 05
Balance on hand.....	23 45
Total	\$349 50

ELEVENTH DISTRICT.

No institute held during 1898.

TWELFTH DISTRICT.

Held at Delta, August 1-12.

Conductor—A. B. Copeland.

Instructors—W. G. Harris, Elizabeth Kendal.

Enrollment—100.

Financial Statement—

Receipts—

Amount on hand.....	\$ 68 79
From counties.....	198 00
From registration fees....	100 00
Total	\$366 79

238 REPORT SUPERINTENDENT PUBLIC INSTRUCTION.

Disbursements—

Paid conductor.....	\$100 00
Paid instructors.....	105 00
Paid incidentals.....	40 05
	<hr/>
Total	\$245 05
Balance on hand.....	121 74
	<hr/>
Total	\$366 79

Bulletins

Arbor Day, 1897 and 1898.

La Fayette Memorial Day, 1898.

George Washington Birthday Anniversary, 1898.

ARBOR DAY, APRIL 16, 1897.

AN ACT TO ESTABLISH ARBOR DAY.

Be it Enacted by the General Assembly of the State of Colorado:

Section 1. The third Friday in April of each year shall be set apart and known as "Arbor Day," to be observed by the people of this state in the planting of forest trees for the benefit and adornment of public and private grounds, places and ways, and in such other efforts and undertakings as shall be in harmony with the general character of the day so established; Provided, That the actual planting of trees may be done on the day designated or at such other most convenient time as may best conform to local climatic conditions, such other time to be designated and due notice thereof given by the several county superintendents of schools for their respective counties.

Sec. 2. The day, as above designated, shall be a holiday in all public schools of the state, and school officers and teachers are required to have the schools under their respective charge observe the day by planting of trees or other appropriate exercises.

Sec. 3. Annually, at the proper season, the governor shall issue a proclamation, calling the attention of the people to this act and recommending and enjoining its due observance. The superintendent of public instruction, and the respective county superintendents of schools shall also promote, by all proper means, the observance of the day, and the said county superintendents of schools shall make annual reports to the state forest commissioner of the action taken in this behalf in their respective counties.

Approved March 22, 1889.

PROCLAMATION—ARBOR DAY.

By command of the statutes I designate April 16 as Arbor day. While the law makes Arbor day a holiday for the school children only, it does not prohibit the mature citizen from par-

ticipating in the ceremonies. In fact, there is no day in the year that will pay as large dividends in pleasure and profit, as will the earnest and intelligent observance of Arbor day by the entire people.

There is no land where trees are as necessary as in our arid region. In the conservation of water lies the field and garden destiny of Colorado. There is a close affinity between forests and a regular water supply. Every tree becomes a miniature reservoir, preserving for greater usefulness every inch of water from spring or cloud.

The present, in contrast with the early appearance of Boulder, Denver, Colorado Springs, Pueblo and other Colorado towns, are tributes to the utility and transforming power of trees. Then they were but dreary stations upon the border of the desert—now cities famous for beauty and prosperity. The beauty that dowers these cities can be made a part of every farm, home and town.

Every bunch of grapes, every peach, every apple, that gathers its perfect color and flavor from our wonderful climate, is the fruit of other Arbor days and the prophecy of the coming time when Colorado will be the Eden of the land.

As we received much from our ancestors, we owe much to posterity, and in no way can we make a greater payment on the debt than by planting trees. Every other product of the soil ends with the season. Trees are almost immortal; their lives span the generations, becoming a proud memorial, a rich inheritance we bequeath to those who come after us.

The promptings of selfishness and the sentiment of gratitude alike invoke us to plant trees.

The spirit of patriotism and beauty mingle their sweet influence on Arbor day.

Hopeless is the man or community that has no regard for tree or flower. It is difficult to love a land that is treeless.

The sentiment, "This is my own, my native land," was not born and finds scant echo where there are no hills or trees.

You plant the home when you plant the tree.

I ask that our citizens not only enjoy, but make useful this Arbor day, remembering that: "He who plants a tree or a bush or a flower, works with God to beautify the garden of the world."

In witness whereof, I have hereunto set my hand and caused the great seal of the state to be affixed, this twenty-ninth day of March, A. D. 1897.

ALVA ADAMS,

By the governor:

Governor.

C. H. S. WHIPPLE,

Secretary of State.

TO SCHOOL OFFICERS AND TEACHERS.

It is a great privilege and a pleasant duty to call attention to Arbor day. The pupils and educators of Colorado need no urgent plea for the proper observance of an anniversary that has for eight years been recognized as one of the most important and significant of all the year.

Arbor day is the embodiment of the altruistic idea. It carries with it the recognition of the universal brotherhood that impels the people of the present to prepare for those who are to follow them in the little journey through the world.

It appeals with a peculiar emphasis to the citizens of this state, which has many a treeless stretch of land between its wooded mountains and fertile valleys.

On the ninth anniversary of the founding of Arbor day, more than 125,000 children will assist in a memorable celebration. It is suggested that in the programmes, special attention be paid to the trees that are indigenous. The spruce, pine, cottonwood, and aspen teach splendid lessons to the children of Colorado. "Rooting upon inhospitable rocks, hiding from the glacier winds, reaching forth to the rays of rare sunshine, crowding down together to drink of the sweetest streams, climbing among the difficult slopes," they are types of hardy and persistent growth that obstacles can not discourage.

The blue spruce and the columbine should be given first place, and whenever possible, the beautiful branches of the state tree should be used in decoration.

The school children of Colorado, by means of the annual rites of Arbor day, hold a tremendous power that is working beneficent results for their state. Recognizing their influence in the preservation of forests and the cultivation of woodlands, all pupils will take an active part in the festivities of the April holiday. Teachers should make each pupil feel a personal responsibility. It is the individual acceptance of public duties that fosters patriotism and loyalty. It is, therefore, urged that programmes be arranged with the view of giving each child some active part.

In looking forward to Arbor day, every effort should be made to prevent the planting of trees from ultimately becoming one of the many labors that are lost to usefulness. A large percentage of the trees die before they have taken root, and an effort should be made to impress upon pupils the necessity of care. Children should study the trees, so that they may know what is necessary for the proper nurture of the saplings they place in the earth.

They should be taught to observe variations of bark, branch, and leaf. Plant growth is one of the perennial miracles constantly presented to a careless world. Too many men and women go through life with their eyes closed to the most suggestive and the most beautiful hints that nature gives.

While preparing for Arbor day, the first duty is to select trees best adapted to the location in which they are to be placed. It has been proved that the oak tree will flourish upon Colorado soil. In places exposed to wind and snow, the oak, the elm, and the ash, are the best trees that can be selected. The sugar maple is a hardy tree, and where there is a reasonable amount of water, its sister, the soft maple, can be grown with great success.

Sycamores have been made to flourish in the Rocky mountain region. The black locust is a good selection where there is a scarcity of water. One of the trees of most rapid growth is the Carolina poplar, which is pyramidal in shape, and is very ornamental. Where there is an abundance of moisture, the black walnut and hickory will repay the effort of conscientious watchfulness. The American wood chestnut has proved that it can easily adapt itself to certain parts of Colorado. The wood of all these trees has a commercial value.

Inasmuch as beauty combines with utility in the ideal of Arbor day, many beautiful shrubs can be selected for the decoration of school lawns. The American arbor vitae and the honey locust make handsome hedges. Climbing vines are an ornamentation much to be desired. The Virginia creeper is a favorite, and one of great reliability. The akeba is insect proof, and grows to a great height. The ampelopsis veitchii needs no trellis work and climbs upon walls without artificial support. The clematis and honeysuckle are always to be admired.

GRACE ESPY PATTON,

Superintendent of Public Instruction.

He who plants a tree,

He plants love;

Tents of coolness spreading out above

Wayfarers he may not live to see.

Gifts that grow are best;

Hands that bless are blest;

Plant! Life does the rest.

Heaven and earth help him who plants a tree

And his work its own reward shall be.

LUCY LARCOM.

ARBOR DAY, APRIL 15, 1898.

AN ACT TO ESTABLISH ARBOR DAY.

Be it Enacted by the General Assembly of the State of Colorado:

Section 1. The third Friday in April of each year shall be set apart and known as "Arbor Day," to be observed by the people of this state in the planting of forest trees for the benefit and adornment of public and private grounds, places and ways, and in such other efforts and undertakings as shall be in harmony with the general character of the day so established; Provided, That the actual planting of trees may be done on the day designated or at such other most convenient time as may best conform to local climatic conditions, such other time to be designated and due notice thereof given by the several county superintendents of schools for their respective counties.

Sec. 2. The day, as above designated, shall be a holiday in all public schools of the state, and school officers and teachers are required to have the schools under their respective charge observe the day by planting of trees or other appropriate exercises.

Sec. 3. Annually, at the proper season, the governor shall issue a proclamation, calling the attention of the people to this act and recommending and enjoining its due observance. The Superintendent of Public Instruction, and the respective county superintendents of schools shall also promote, by all proper means, the observance of the day, and the said county superintendents of schools shall make annual reports to the state forest commissioner of the action taken in this behalf in their respective counties.

Approved March 22, 1889.

PROCLAMATION—ARBOR DAY.

In accord with the statutes I hereby designate Friday, April 15, as Arbor day. I earnestly invoke its intelligent observance

by every citizen of Colorado. All interests could well afford to suspend for a day their regular vocations, and give the time to tree planting; no other investment will pay a more satisfactory dividend.

Tree planting is a question of public economy—an act of patriotism. Common sense and selfishness, as well as the statutes, should impel us to plant trees.

As the teachers give the instructions suggested by the law, a lesson in bird life would not be inappropriate. A child that loves and cares for trees, flowers, birds, will never become a bad citizen.

Groves, blossoms, birds, are nature's poetry; the music and art of the fields. In a treeless country you can never hear the celestial harmonies that Longfellow and Lowell heard the wind play among the trees. Inspiration, patriotism, manhood, are seldom the products of a treeless land. No poet sings, no artist dreams in a country upon which falls the shadow of neither tree nor hill. Can we conceive of a Chaucer, a Wordsworth, a Scott, or a Longfellow without forests?

No one ever came to a treeless country for pleasure, or remained but from compulsion.

No story of liberty that has not its trees; they blend with every memory of life; they are twined upon the most sacred of historic pages; they are symbols in every faith. Art, literature, mythology, draw from them some of their richest beauty.

All men hunger for a monument; there may be those more costly, but none so useful, so sensible or beautiful as a tree. It carries not only a sweet memory of him who dropped the seed, but pays a debt due the past and satisfies an obligation which every mortal owes to the future. The life of a tree touches a more remote past and reaches to a more distant future than any other living thing. Some of the cedars of Lebanon have lived through every age of the Christian calendar. Olives still grow upon the trees moistened by the tears of a weeping Christ in Gethsemane.

The destiny of Colorado will be strongly influenced by the science of forestry and horticulture. With these are allied the questions of rainfall, irrigation, conservation of water, climate.

Every planted acre of forest makes possible the future irrigation and cultivation of several acres now arid and desolate.

The splendid horticultural harvest of 1897 demonstrates that orchard planting satisfies the spirit of avarice as well as sentiment. Trees in Colorado are not only an asset, but a blessing and a benediction.

God has given us valleys as rich as Eden; mountains, skies, and climate that are ideal; we need but trees and verdure to be-

come a home of beauty and enchantment. If for each one of our half million population there would be planted each year but a single tree, our descendants would soon revel in a true Edenic land of beauty, happiness, and prosperity.

In witness whereof, I have hereunto set my hand and caused the great seal of the state to be affixed this twenty-second day of March, A. D. 1898.

ALVA ADAMS.

By the governor:

C. H. S. WHIPPLE,

Secretary of State.

TO SCHOOL OFFICERS, TEACHERS, AND PUPILS.

The school children of Colorado are most earnestly requested to celebrate Arbor day, the springtime festival that provides for the future welfare of the nation. In the book of books it is written: "The tree of the field is man's life." The tree is the beautiful laboratory in which nature transforms many a chemical element into substances necessary to the every day demands of humankind. It provides food and shelter, warmth and light. From the tree, man has shaped his tools and woven his clothing.

The new country that waited so long for the occupancy of a civilized people was richly clothed with primeval forests that for centuries have been converted to the demands of trade and commerce. In the urgency of many needs and under the stress of diverse business, the people of the United States forgot to think of the to-morrow of the nation, and not two decades have passed since attention began to be called to the plundering of the rich timber lands.

Arbor day is the outgrowth of a movement to protect the forests. Its aim is to call attention to the importance of trees. The planting of saplings is but one expression of the real Arbor day thought which deals with man's relation to nature. In many parts of Colorado, it is not practicable to break the sod for the purpose of placing young trees, but this fact need not interfere with the general celebration of the tenth Arbor day anniversary. The true spirit of this annual observance can be awakened in snowbound mining camps and in isolated mountain towns. The perennial miracle of change and growth can be studied. It is earnestly requested that every teacher in the state will read from leaf and branch the inspiring lessons enfolded in the trees. Arbor day gives the children an opportunity to assume the first responsibilities of citizenship. It suggests the universal duty of each

individual. The holiday should be but the beginning of a closer acquaintance with the world, beautiful with its marvelous procession of seasons. The children of Colorado are especially fortunate in their environment. The indigenous trees and shrubs present significant lessons. The flora is more rich and varied than that of any other state. The pines and hemlocks hoard the snows of winter for use in the heat of summer. The cottonwoods and quaking aspens have mysterious secrets for those who approach them with a student's interest.

This year it is again urged that the object of Arbor day be conscientiously fulfilled. It is not enough to plant a tree. Continued attention should be given the saplings that are to take root in new soil. The children should give their intelligent care to the trees they plant. It is constancy to any undertaking that insures its success. Unsightly trunks, leafless and dead, stand in many places as the only evidence that past Arbor days have been remembered. In addition to the 1898 trees, it is asked that vigorous young saplings be put in soil now occupied by these tokens of other efforts to provide foliage and verdure for barren places.

The selection of trees for Arbor day should be made with a first thought concerning what is best adapted to climate and soil. Where the public school grounds are well shaded the school children would do well to direct their attention to the streets and parks.

"Nature never did betray
The heart that loved her; 'tis her privilege,
Through all the years of this our life, to lead
From joy to joy; for she can so inform
The mind that is within us, so impress
With quietness and beauty, and so feed
With lofty thoughts, that neither evil tongues,
Rash judgments, nor the sneers of selfish men,
Nor greetings where no kindness is, nor all
The dreary intercourse of daily life
Shall e'er prevail against us, or disturb
Our cheerful faith that all which we behold
Is full of blessing."

GRACE ESPY PATTON,
Superintendent of Public Instruction.

LA FAYETTE MEMORIAL DAY.

OCTOBER 19, 1898.

State of Colorado, Executive Chamber,

Denver, October 10, 1898.

To the Superintendent of Public Instruction, Denver, Colorado:

Dear Madam—July 4, 1900, has been selected as the date, and the city of Paris as the place, for the unveiling of a monument to General LaFayette. It is to be dedicated in the name of the youth of the United States. That every child who is able may participate in this patriotic purpose it is suggested that the anniversary of the "Surrender of Yorktown," October 19, be designated as LaFayette day, and that upon that date the public schools of our country shall hold simple exercises having for a topic and an inspiration the life and character of LaFayette. Every child who is so disposed may then contribute his pennies or nickels which will form a fund for the building of a worthy monument to one of the greatest apostles of liberty, and an ardent, sacrificing friend of American independence when the great cause needed friends.

President McKinley has endorsed this project, and I am sure it will appeal to every American who has read the story of the American Revolution. General LaFayette is a noble example of unselfish love of the principles upon which our republic is founded. His career is an exalted object lesson for the youth of our country. It was his influence that gave the struggling colonies the sympathy, aid, and money of France. He secured in France, for the use of Washington and his compatriots, a loan of 27,000,000 francs, and said in regard to payment, "Of the 27,000,000 we have loaned you, we forgive you 9,000,000 as a gift of friendship, and when with years there comes prosperity, you can pay the rest without interest."

A gift of gratitude and love will be the contributions of American youth to aid in building a monument to commemorate such a life and character.

If the above suggestion meets your approval I shall be pleased if you will communicate it to the school teachers of Colorado.

Very truly,

ALVA ADAMS,
Governor.

Office of the Superintendent of Public Instruction,

Denver, Colorado, October 10, 1898.

To the Teachers and Pupils of Colorado:

In accordance with the foregoing communication from Governor Adams, I earnestly request the teachers and pupils of the Colorado public schools to remember the life and deeds of General LaFayette, the early friend and gallant defender of our country, by a fitting observance of October 19.

The grave of LaFayette is situated in the cemetery of the Convent of the Petit Picpus, Paris. It is proposed to unveil the monument to be given by the American people July 4, 1900, as a fitting celebration of United States day at the Paris exposition. The cost of this gift to France will amount to a quarter of a million dollars, and every citizen of the United States will have an opportunity to contribute to it. On October 19, collections will be taken in the schools and colleges of the country, and it is believed that the younger generation will give the amount necessary to the sending of this tribute to the French republic.

The children of the land have been made the principals in this splendid enterprise. The lessons of the day, which open history at some of its most brilliant pages, will arouse a spirit of exalted enthusiasm and patriotism in the hearts of the children. It is hoped that appropriate exercises will be prepared for every school in the state, and that Colorado will be foremost in assisting the United States to send an acknowledgment of the nation's lasting gratitude to a brave soldier, a loyal friend, an unselfish leader, who held freedom above every inheritance.

GRACE ESPY PATTON,
Superintendent of Public Instruction.

LA FAYETTE'S PRAYER FOR THE UNITED STATES
OF AMERICA.

"May this immense temple of Freedom ever stand a lesson to oppressors, an example to the oppressed, and a sanctuary for the rights of mankind! And may these happy United States attain that complete splendor and prosperity which will illustrate the blessings of their government, and, for ages to come, rejoice the departed souls of its founders."

GEORGE WASHINGTON BIRTHDAY ANNIVERSARY.

FEBRUARY 22, 1898.

A new interest will this year mark the celebration of the birthday anniversary of George Washington, the first president of the United States. A feature of the commemorative exercises to be held in all the schools of the land will be the outlining of plans for the National University for which Washington provided in a long neglected bequest. It is hoped that every pupil in the public schools of Colorado will feel a personal responsibility in the establishment of this university that is to realize the ideal of George Washington. County superintendents, principals, and teachers are earnestly requested to give the widest distribution to the following circular, prepared by Mrs. George L. Scott, statê chairman of the George Washington Memorial Association.

GRACE ESPY PATTON,
Superintendent of Public Instruction.

The George Washington Memorial Association was organized in Washington, April 8, 1897. Its purpose is to promote a patriotic interest in the bequest of George Washington for the establishment of a national university, an exclusively post graduate university, which shall preclude the necessity of university students of the United States resorting to the universities of foreign countries for the completion of their éducation.

There are nineteen acres of ground in Washington, D. C., now owned by the government and held for the purpose of a United States university. The George Washington Memorial Association has been given the privilege of erecting one of the university buildings upon these grounds. This society desires the coöperation of every force for good in the country,—clubs,

patriotic organizations, and school children. It especially desires to create such patriotic fervor among the children, who are citizens soon to be in control of the government, that they will demand the founding of the National University in memory of Washington who wanted every boy and girl to grow up a loyal American. In his will, the first president bequeathed the sum of \$25,000 to congress, this sum to be held in trust, and to be devoted to the establishment of such a university as is now projected. If this bequest had been properly managed it would now amount to four and a half million dollars. As part payment of a debt of honor due the great Washington, it is the aim of the memorial society to erect the first building which shall be dedicated to educational purposes. The society asks the children to join in making ready for a suitable celebration of Washington's birthday by appropriate recitations and songs.

The George Washington Memorial Association desires to raise a fund of \$250,000 to be used in erecting the administration building of the university. This movement will be formally begun February 22, 1898, and it is the hope that it may be possible to lay the corner stone, December 14, 1899, thus commemorating the one hundredth anniversary of Washington's death.

MRS. GEORGE L. SCOTT,

State Chairman George Washington Memorial Association.

2842 Josephine street, Denver, Colorado.

REPORTS
OF
State Educational Institutions

Agricultural College.

Normal School.

University of Colorado.

School for the Deaf and the Blind.

Industrial School for Boys.

Industrial School for Girls.

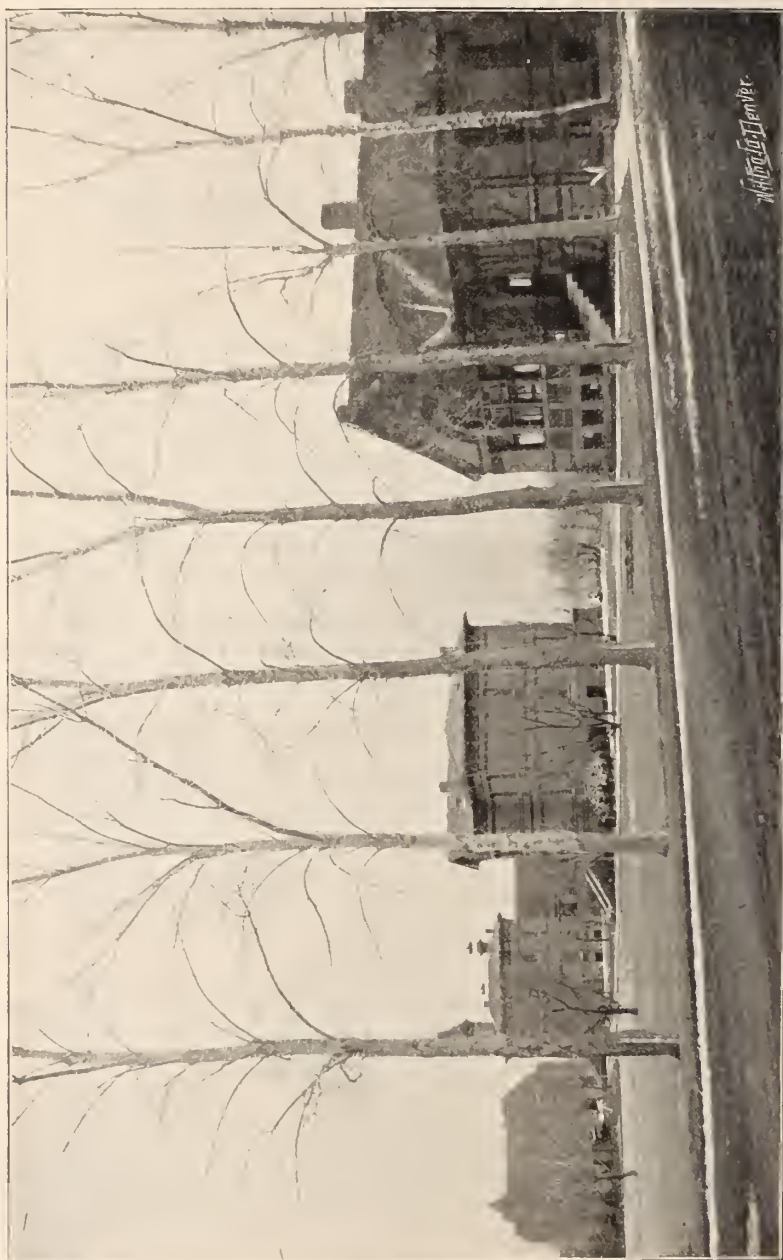
BIENNIAL REPORT OF THE STATE AGRICULTURAL COLLEGE.

Extracts from an act of the general assembly of Colorado to establish a state board of agriculture and to define its duties:

"That a board is hereby constituted and established which shall be known by the name and style of the state board of agriculture. It shall consist of eight members, besides the governor of the state and the president of the State Agricultural College, who shall be ex officio members of the board. The governor, by and with the consent of the senate, on or before the third Wednesday of January of each biennial session of the general assembly, shall appoint two members of the board to fill the vacancies that shall next occur, which vacancies shall be so filled that at least one-half of the appointed members of the board shall be practical farmers." (The term of a member of the board is eight years.)

"The state board of agriculture shall have the general control and supervision of the State Agricultural College, the farm pertaining thereto, and the lands which may be vested in the college by state or national legislation, and of all appropriations made by the state for the support of the same. The board shall have plenary power to adopt all such ordinances, by-laws, and regulations, not in conflict with the law, as they may deem necessary to secure the successful operation of the college and promote the designed objects."

"As soon as suitable buildings can be erected and furnished a school shall be established, and shall be known by the name and style of The State Agricultural College. The design of the institution is to afford thorough instruction in agriculture and the natural sciences connected therewith. To effect that object most completely, the institution shall combine physical with intellectual education, and shall be a high seminary of learning, in which the graduates of the common school, of both sexes, can commence, pursue, and finish a course of study, terminating in



SOME COLLEGE BUILDINGS - EAST FRONT, COLLEGE AVENUE.

thorough theoretical and practical instruction in those sciences and arts which bear directly upon agriculture and kindred industrial pursuits."

Extracts from acts of congress relating to colleges giving instruction in agriculture and the mechanic arts:

PURPOSE OF GOVERNMENT AID.

"The leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life." (Section 4, Morrill act, July 2, 1862.)

ADDITIONAL ENDOWMENT BY THE GENERAL GOVERNMENT.

"For the more complete endowment and maintenance of colleges for the benefit of agriculture and the mechanic arts now established, or which may be hereafter established, in accordance with an act of congress approved July 2, 1862, the sum of \$15,000 for the year ending June 30, 1890, and an annual increase of the amount of such appropriation thereafter for ten years by an additional sum of \$1,000 over the preceding year, and the annual amount to be paid thereafter to each state and territory shall be \$25,000, to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their applications in the industries of life and to the facilities for such instruction." (Section 1, Morrill act, August 30, 1890.)

THE STATE BOARD OF AGRICULTURE.

Hon. M. A. Leddy, Manitou, term expires 1899.

Hon. A. S. Benson, Loveland, term expires 1899.

Hon. James L. Chatfield, Gypsum, term expires 1901.

Hon. A. Lindsley Kellogg, Rocky Ford, term expires 1901.

Hon. B. F. Roekafellow, Cañon City, term expires 1903

Hon. Eliza F. Routt, Denver, term expires 1903.

Hon. John J. Ryan, Fort Collins, term expires 1905.

Hon. P. F. Sharp, Pueblo, term expires 1905.

Governor Alva Adams, ex-officio.

President Alston Ellis, ex-officio.

Officers.

A. L. Kellogg, president.

James E. DuBois, secretary.

George W. Kephart (state treasurer, Denver, Colorado), treasurer.

Charles H. Sheldon, local treasurer.

THE STATE AGRICULTURAL COLLEGE, FORT COLLINS, COLO.

NOVEMBER 1, 1898.

Courses of Study.

The courses of study are four, each requiring four years in addition to two years of preparatory work, and each leading to the degree of B. S. The agricultural course, the mechanical engineering course, the civil and irrigation engineering course, and the ladies' course. Provision is made for post-graduate work. The degrees of C. E. and M. E. are conferred, on those worthy of holding them, by faculty action approved by the governing board. A commercial course, covering a period of two years, is established, entrance to which requires the same qualifications as for admission to the Freshman class; no degree is given.

Names of Instructors and Regular Employees, With Their Annual Salaries; Also, a Statement of the Fund or Funds Whence Such Salaries Are Drawn.

Faculty—	College Fund.	Station Fund.
Alston Ellis, A. M., Ph. D., LL. D., President, and Professor of Logic and Political Econ- omy	\$ 4,500 00	\$ 900 00
James W. Lawrence, B. S., Professor of Me- chanical Engineering and Drawing.....	1,800 00	.....

SUPERINTENDENT OF PUBLIC INSTRUCTION. 261

Louis G. Carpenter, M. S., Professor of Civil and Irrigation Engineering.....	1,300 00	500 00
Charles S. Crandall, M. S., Professor of Botany and Horticulture.....	1,300 00	500 00
Clarence P. Gillette, M. S., Professor of Zoology and Entomology.....	1,300 00	500 00
Wells W. Cooke, B. S., A. M., Professor of Agriculture	1,300 00	500 00
William P. Headdden, A. M., Ph. D., Professor of Chemistry and Geology.....	1,300 00	500 00
Theodosia G. Ammons, Professor of Domestic Science	1,200 00	.....
Jacob A. Christman, Principal Commercial Department	1,200 00	.....
Edward B. House, B. S., E. E., Professor of Mathematics	1,200 00	.....
James E. DuBois, Secretary of the Faculty	1,000 00	500 00
Edward M. Traber, A. B., Professor of English and Philosophy.....	1,200 00	.....
Jennie E. McLain, B. S., Professor of History and Literature.....	1,200 00	.....
William C. Davis, First Lieutenant, Fifth Artillery, U. S. A., Professor of Military Science and Tactics.....	.....	.....
Stenographer—		
Frank H. Thompson, B. S.....	840 00	.....
Librarian—		
Marguerite E. Stratton, B. S.....	650 00	.....
Principal Preparatory School—		
Mary E. Gill.....	650 00	.....
Assistants—		
Jay D. Staunard, B. S., Physics and Civil Engineering	1,000 00	.....
Robert E. Trimble, B. S., Meteorology and Irrigation Engineering.....	.....	900 00
L. D. Crain, B. M. E., Mechanical Engineering and Drawing.....	1,000 00	.....
Allen P. Greenacre, B. S., Forge-Room Work and Drawing.....	600 00	.....
William F. Garbe, Foundry Practice.....	540 00	.....
Frank L. Watrous, Agriculture.....	.....	1,000 00

Edward S. G. Titus, Dairy (student help).....	150 00	.....
Carl H. Potter, B. S., Botany and Horticulture.		700 00
Charles F. Mergelman, Floriculture and Land- scape Gardening.....	800 00	.....
Louis A. Test, B. M. E., A. C., Chemistry.....		900 00
Fred Alford, B. S., Chemistry.....		540 00
John E. Kiteley, B. S., Chemistry.....		540 00
Elmer D. Ball, B. S., Zoology and Entomology..		900 00
Lathrop M. Taylor, B. S., Stenography and Typewriting	1,000 00	.....
Charles Golding-Dwyre, Jr., Bookkeeping and Penmanship	500 00	.....
John W. Newman, B. S., Mathematics.....	500 00	.....
Sub-Station Superintendents—		
Harvey H. Griffin, B. S., Arkansas Valley, Rocky Ford, Colo.....		900 00
J. E. Payne, M. S., Rainbelt, Cheyenne Wells, Colo.		800 00
Engineers and Janitors—		
William Kelly	780 00	.....
John H. Cameron, Sr.....	540 00	.....
James L. Veazey.....	540 00	.....
A. M. Wilkin.....	540 00	.....
Isaac N. Chatfield.....	540 00	.....
Laborers Regularly Employed—		
J. H. Cameron, Jr.....	540 00	.....
Alvin Fry.....	540 00	.....
Frank Matthews.....	540 00	.....
N. C. Strayer.....	540 00	.....
Robert Cameron.....	480 00	.....
J. W. Coffman.....	480 00	.....
Total	\$34,090 00	\$11,080 00
General—		
Station labor.....		\$ 2,489 20
College labor.....	\$ 500 00	.....
Student labor.....	900 00	.....
Total	\$ 1,400 00	\$ 2,489 20

Summary.

Salaries	\$34,090 00	\$11,080 00
Labor	1,400 00	2,489 20
Grand total.....	\$35,490 00	\$13,569 20

**THE AGRICULTURAL EXPERIMENT STATION,
FORT COLLINS, COLO.**

Board of Control.

The State Board of Agriculture.

Executive Committee in Charge.

A. L. Kellogg, chairman, Alston Ellis, John J. Ryan, P. F. Sharp, B. F. Rockafellow.

Station Council.

Alston Ellis, A. M., Ph. D., LL. D., president and director.
Wells W. Cooke, B. S., A. M., agriculturist.
C. S. Crandall, M. S., horticulturist and botanist.
William P. Headden, A. M., Ph. D., chemist.
L. G. Carpenter, M. S., meteorologist and irrigation engineer.
C. P. Gillette, M. S., entomologist.
James E. DuBois, secretary.
Frank H. Thompson, B. S., stenographer.

Assistants.

Frank L. Watrous, agriculturist.
Carl H. Potter, B. S., horticulturist.
Louis A. Test, B. M. E., A. C., chemist.
Fred Alford, B. S., chemist.
John E. Kiteley, B. S., chemist.
Elmer D. Ball, B. S., entomologist.
Robt. E. Trimble, B. S., meteorologist and irrigation engineer.

Sub-Stations.

Harvey H. Griffin, B. S., superintendent Arkansas valley station, Rocky Ford, Colorado. J. E. Payne, M. S., superintendent Rainbelt station, Cheyenne Wells, Colorado.

**Work of Stations as Specified by Act of Congress, March 2,
1887.**

"It shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the

physiology of plants and animals; the diseases to which they are severally subject, with the remedies of the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural and artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states or territories." (Section 2.)

Revenue for Station Support—Whence Derived.

"That for the purpose of paying the necessary expenses of conducting investigations and experiments, and printing and distributing the results as hereinbefore described, the sum of \$15,000 per annum is hereby appropriated to each state, to be specifically provided for by congress in the appropriations from year to year." (Section 5.)

SUMMARY OF COLLEGE INVENTORIES.

NOVEMBER 30, 1898.

Lands and Adjuncts—

Two hundred and forty (240) acres of land at an average value of \$100 per acre.....	\$24,000 00
Trunk sewer to the Poudre river.....	6,000 00
Pipe-line for water supply.....	2,900 00
	————— *\$ 32,900 00

Buildings, Including Permanent Fixtures—

Main college building.....	\$36,000 00
Mechanical engineering building.....	21,000 00
Agricultural building and creamery.....	10,500 00
Horticultural building.....	15,100 00
Civil engineering building.....	9,000 00
Commercial college building.....	6,000 00

* This estimate includes numerous sewer laterals and water connections; a reservoir for storage of water; all other improvements of the college grounds; and ditch stock, worth \$2,000.00.

SUPERINTENDENT OF PUBLIC INSTRUCTION. 265

Chemical laboratory.....	27,000 00	
Building for department domestic science.....	4,650 00	
Greenhouses (\$3,000) and forcinghouse (\$1,500)....	4,500 00	
Barns, toolhouse, and shed on horticultural grounds	1,425 00	
Barn on college farm.....	4,000 00	
Sheep barn and paddocks (\$600); implement house and shed (\$450); pig-pens (\$300); other stock-pens (\$350); root-cellar and silo (\$250); fencing (\$1,450) on college farm.....	3,400 00	
Farm dwelling house.....	2,700 00	
Depot, hose-house, and apiary.....	700 00	
	<hr/>	\$145,975 00
Grand total.....		\$178,875 00

Department Inventories—

History and literature.....	\$ 400 00	
English and philosophy.....	189 17	
Mathematics	572 85	
Military science and tactics.....	7,338 05	
Zoology and entomology.....	4,953 85	
Mechanical engineering and drawing	14,306 95	
Agriculture	6,372 00	
Botany and horticulture.....	6,573 93	
Civil and irrigation engineering.....	10,227 63	
Chemistry	2,870 65	
Domestic science.....	870 68	
Commercial department.....	1,793 24	
	<hr/>	\$ 56,169 00

Miscellaneous—

President's office No. 1.....	\$ 3,878 17	
President's office No. 2.....	2,254 50	
Secretary's office.....	494 28	
Director's office.....	865 50	
Library	10,752 28	
	<hr/>	\$ 18,244 73
Grand total for college.....		\$253,288 73

Total value of college property, 1891.....	\$144,568 98
Total value of college property, 1892.....	176,600 26
Total value of college property, 1893.....	187,847 53

Total value of college property, 1894.....	197,633 78
Total value of college property, 1895.....	207,411 83
Total value of college property, 1896.....	212,699 52
Total value of college property, 1897.....	232,667 62
Total value of college property, 1898.....	253,288 73

Experiment Station Inventories.

NOVEMBER 30, 1898.

Agricultural Section, Fort Collins—

Farm implements.....	\$ 103 00	
Dairy supplies.....	350 00	
Office fixtures.....	374 00	
		\$ 827 00

Horticultural Section, Fort Collins—

Instruments and supplies.....	\$ 634 59	
		634 59

Section of Meteorology and Irrigation Engineering,**Fort Collins—**

Meteorological instruments.....	\$ 383 40	
Irrigation apparatus.....	376 28	
Hydraulic apparatus.....	166 95	
Stationery and office supplies.....	142 31	
		1,068 94

Entomological Section, Fort Collins—

Laboratory supplies.....	\$ 78 45	
Entomological supplies.....	84 65	
Insecticides and apparatus.....	101 00	
Apiary supplies.....	162 95	
Microscopical apparatus in charge.....	335 00	
		762 05

Total for home station property..... \$ 3,292 58

Arkansas Valley Station, Rocky Ford—

Two hundred (200) acres of land.....	\$ 9,800 00	
Water rights and apparatus.....	1,858 00	
Buildings and fencing.....	2,372 80	
Live-stock	166 00	
Farm implements.....	553 75	
Farm products on hand.....	740 65	
		15,491 20

Rainbelt Station, Cheyenne Wells—

One hundred and sixty (160) acres of land.....	\$ 200 00	
House, barn, fencing, etc.....	1,265 00	
Farm products and supplies on hand.....	91 05	
Live-stock and implements.....	348 85	
		1,904 90

San Luis Valley Station, Monte Vista—

One hundred and sixty (160) acres of land.....	\$ 2,110 00	
Twenty (20) inches of water in the Rio Grande canal	300 00	
Buildings, fencing, and well.....	1,497 00	
Horses, wagon, and harness.....	177 00	
Farm implements, etc.....	54 90	
		4,138 90

Divide Station, Monument—

Forty (40) acres of land.....	\$ 200 00	
Buildings	600 00	
		800 00

Total sub-station property.....	\$ 22,335 00	
Grand total experiment station property, 1898.....	\$ 25,627 58	
Grand total experiment station property, 1897.....	25,643 54	
Grand Total experiment station property, 1896.....	25,289 62	
Grand total experiment station property, 1895.....	27,086 73	
Grand Total experiment station property, 1894.....	29,797 18	
Grand total experiment station property, 1893.....	25,037 12	
Fort Collins, Colo., November 30, 1898.		

REPORT OF THE PRESIDENT.

Fort Collins, Colorado, November 30, 1898.

Hon. Grace Espy Patton-Cowles, State Superintendent of Public Instruction:

Agreeably to the provisions of an act of the general assembly of Colorado, found in the Session Laws of 1881, the biennial report of the State Agricultural College is herewith presented.

Owing to the fact that the report is prepared in the middle of the fall term of the college year 1898-1899, and some time prior to the close of the state fiscal year, the figures showing the student enrollment and revenue receipts will not be complete up to the date found in the heading.



SOME COLLEGE BUILDINGS—NORTH FRONT, LAUREL STREET.

The two years that have passed since the preparation of the last report have brought continued prosperity to the institution. At no time in its history has it been so well equipped for the prosecution of its various forms of educational work as it is now. It is not too much to say that, in the educational field, it is doing a work of the highest importance to the state—a work which no other institution of learning, within our borders can do or ought to do. It is the definite aim of the authorities of the college—an aim never lost to view—to differentiate its work from that of every other educational institution in the clearest manner possible. There is a general area of educational work that all institutions of learning may properly cultivate. All the courses of study, now in successful operation in the college, make pretty full provision for the general education of the students who enter upon them. After a desirable general culture is acquired by the student, the next aim is to bring him into theoretical and practical contact with “such branches of learning as are related to agriculture and the mechanic arts.” In the latter work, the scientific and technical departments of the college, well manned and well equipped as they are, show their wide reaching influence. It is the pride of those connected with the college, that all its scientific and technical work is so well ordered and successfully prosecuted. The college, by reason of persistent efforts to strengthen its work along practical lines, is becoming one of the best scientific and technical schools in the country. Its work in most departments of science; in civil, irrigation, and mechanical engineering; in domestic economy—all that vitally touches the home life of the people; and in all the subjects taught in the comprehensive course of the business college, is of high grade and of that character best to fit students for a life of practical, remunerative service after their college days have closed. No attempt is made to force those who leave the college, either before or after graduation, to become farmers; but the opportunities for such instruction as will the better fit students for intelligent and profitable work on a farm are never lacking. If a student who elects to follow any of the prescribed courses, mapped out by college authority, passes over it without gaining inclination and power to do something useful and of a living-making nature, he is the exception to the well-nigh universal rule.

Enrollment Statistics.

The following statements show the student enrollment and classification for the college years, 1896-'97 and 1897-'98.

Summary for 1896-1897.

	Male.	Female.	Total.
Post-graduates	6	1	7
Seniors	7	5	12
Juniors	21	6	27
Sophomores	34	10	44
Freshmen	33	33	66
Sub-freshmen	41	22	63
Preparatory class.....	17	6	23
Commercial course.....	61	20	81
Irregulars	3	9	12
Total	223	112	335

The students represented fourteen states and one territory, as follows: California, 4; Colorado, 307; Illinois, 2; Indiana, 1; Iowa, 1; Kansas, 2; Missouri, 3; New Mexico, 2; New York, 2; North Carolina, 1; Ohio, 1; South Dakota, 1; Washington, 1; Wisconsin, 2; and Wyoming, 5. Total, 335.

The Colorado students represented twenty-seven counties, as follows: Arapahoe, 14; Boulder, 13; Clear Creek, 3; Chaffee, 11; Conejos, 3; Delta, 8; Dolores, 1; Douglas, 1; Eagle, 6; Elbert, 2; El Paso, 2; Fremont, 10; Garfield, 2; Grand, 3; Gunnison, 3; Huerfano, 3; Larimer, 188; Las Animas, 3; Logan, 1; Mesa, 1; Montrose, 1; Otero, 4; Ouray, 1; Park, 2; Routt, 2; Saguache, 1; and Weld, 18. Total, 307.

Summary for 1897-1898.

	Male.	Female.	Total.
Post-graduates	6	1	7
Seniors	12	1	13
Juniors	24	1	25
Sophomores	33	15	48
Freshmen	45	16	61
Sub-freshmen	38	19	57
Preparatory class.....	28	17	45
Commercial course, seniors.....	6	3	9
Commercial course, juniors.....	51	19	70
Special-class students.....	2	7	9
Total	245	99	344

The students represented twelve states and two territories, as follows: Colorado, 314; Illinois, 1; Iowa, 2; Kansas, 3; Kentucky, 1; Michigan, 1; Missouri, 3; Nebraska, 1; Ohio, 2; South Dakota, 1; Tennessee, 1; Wyoming, 8; Arizona, 1; and New Mexico, 5. Total, 344.

The Colorado students represented thirty-three counties, as follows: Arapahoe, 12; Boulder, 17; Clear Creek, 6; Chaffee, 5; Conejos, 2; Delta, 9; Dolores, 1; Douglas, 1; Eagle, 7; El Paso, 8; Fremont, 3; Garfield, 1; Gilpin, 1; Grand, 4; Gunnison, 3; Huerfano, 3; Jefferson, 1; La Plata, 1; Larimer, 190; Las Animas, 1; Mesa, 2; Morgan, 1; Otero, 1; Park, 1; Phillips, 3; Pitkin, 2; Pueblo, 1; Rio Blanco, 2; Rio Grande, 3; Routt, 2; Summit, 1; Weld, 18; and Yuma, 1. Total, 314.

The enrollment for the first term of the college year—the fall term of thirteen weeks, which usually closes about December 1—is a fair index of what the enrollment of one year will show in the way of increase over that of the preceding one. Below are given the figures that represent the student registration of this term for a number of years.

Year.	Males.	Females.	Total.
1892	127	36	163
1893	93	37	130
1894	148	57	205
1895	144	62	206
1896	202	88	290
1897	225	91	316
*1898	234	83	317

The enrollment statistics of late years show that the college is drawing patronage from an area that is constantly widening. The institution has always drawn largely upon Fort Collins and vicinity for students, for reasons that are obvious upon second, if not upon first, thought. The college has not existed a score of years. Its location, while highly desirable in many important respects, places it beyond easy and inexpensive reach of many portions of the state. Its name, too, has given many of our own people a wrong understanding of the extent and nature of the educational field in which its scholastic effort is put forth. All institutions of a like character, in new states especially, show a local patronage widely out of proportion to that contributed by the state at large. It is a most encouraging

* Not quite two-thirds of fall term.

fact that the college is making larger and larger drafts upon all sections of Colorado for students. It is not chance that brings us students from Nebraska, Wyoming, and New Mexico. Students from abroad come to us because we offer them educational advantages, in the fields of intellectual and industrial activity, which they can not better, or so well, secure elsewhere. As the work of the college, in all its many phases, becomes better known its popularity will correspondingly increase and the attendance of students will be more representative of the people of the state.

The 317 students, registered November 1, 1898, five weeks prior to the close of the fall term, represent two foreign countries, thirteen states, and one territory, as follows: Mexico, 1; Turkey, 1; Arkansas, 1; Colorado, 279; Illinois, 1; Iowa, 2; Kansas, 2; Massachusetts, 2; Minnesota, 1; Missouri, 1; Nebraska, 5; New York, 1; New Mexico, 5; Ohio, 1; South Dakota, 1; and Wyoming, 13. Total, 317.

The students from Colorado represent thirty-eight counties, as herewith shown: Arapahoe, 14; Boulder, 13; Chaffee, 3; Clear Creek, 3; Conejos, 1; Costilla, 4; Delta, 5; Dolores, 2; Douglas, 1; Eagle, 4; El Paso, 6; Elbert, 1; Fremont, 8; Garfield, 1; Gilpin, 1; Grand, 2; Gunnison, 7; Huerfano, 3; Lake, 5; La Plata, 4; Larimer, 149; Las Animas, 1; Logan, 2; Mesa, 1; Mineral, 1; Montrose, 2; Morgan, 2; Otero, 1; Ouray, 3; Phillips, 1; Pueblo, 3; Park, 1; Rio Grande, 2; Routt, 1; Saguache, 1; Summit, 2; Weld, 16; and Yuma, 2. Total, 279.

The enrollment for the present college year, 1898-'99, as before shown, is classified as follows:

Preparatory class.....	27
Sub-freshman class.....	64
Students classified as irregulars.....	29
Students in commercial college.....	60
Freshman class.....	50
Sophomore class.....	36
Junior class.....	29
Senior class.....	19
Post-graduates	3
Total	317

Each college year closes with the exercises of "Commencement Day" in June. The enrollment of students and the num-

ber of graduates for each year since the opening of the college is shown in the following table:

Year.	Males.	Females.	Total.	Graduates.
1880	14	11	25	0
1881	35	22	57	0
1882	49	32	81	0
1883	50	31	81	0
1884	40	37	77	3
1885	50	46	96	6
1886	45	42	87	1
1887	63	42	105	4
1888	71	38	109	4
1889	73	34	107	2
1890	56	18	74	9
1891	77	29	106	3
1892	101	45	146	9
1893	135	44	79	7
1894	142	56	198	7
1895	164	66	230	13
1896	161	71	232	12
1897	223	112	335	11
1898	245	99	344	22**
1898*	234	83	317	...

The graduates from the College, who completed one of its regular courses, now number one hundred and fifteen. The first class to graduate from the commercial department was that of 1898. The positions in the working world held by these representatives of the College testify to what it is doing in giving the industrial classes that liberal and practical education that will best fit them for the several pursuits and professions of life.

Courses of Study.

I quote from my report, to the state board of agriculture, presented more than a year ago:

"The College offers students a choice from five distinct courses of study; namely,—agricultural; mechanical engineering; civil and

* Fall term extending to November 1, 1898.

** Including nine graduates from the commercial department.

irrigation engineering; ladies'; and commercial. These courses with the exception of the one last named, require four years' uninterrupted work for their successful completion. Students who complete either of these courses to the satisfaction of the college authorities receive the degree of bachelor of science. Post-graduate work is required for the degrees of civil engineer and mechanical engineer. The course of study in the commercial department covers a period of three years. This course provides for systematic work in all branches usually taught in the best business colleges of the country; and, in addition thereto, makes provision for much instruction in branches which properly belong to a general educational course. It is not the aim of the commercial course to attempt to fit students for book-keepers and stenographers in the shortest possible time. Experience has clearly shown that persons of limited education, who take business courses, invariably fall into the lowest class of workers. The student who completes the three-years' course is qualified to discharge the duties of bookkeeper, private secretary, and shorthand amanuensis. Tuition in the classes of the commercial course, as in all other departments and classes of the College, is free. The needed text-books and materials are supplied to students at actual cost which, owing to the manner of purchase, is below the usual wholesale rate."

"The department of domestic science began with the fall term of 1895. The work of the new department adjusts itself naturally and easily to the conditions under which all college work is prosecuted. There is no conflict of classes. Nearly all the lady students have taken up the work of this department. There is promise that this work will be an interesting, a profitable, and a popular part of the instruction of the students who take the 'ladies' course' in the College."

"The course of the preparatory department has been rearranged so as to make provision for two years' work. The work of the added class—the sub-freshman—includes most of that formerly required of the freshman class. The present preparatory class has the work usually included in the course for eight-year pupils in the common schools. Owing to the small attendance, and the excellent facilities for instruction, the members of this class have special advantages for prosecuting their studies. Then, too, they have access to the library, attend general exercises daily, and profit by the general management under which students are taught to respect, and yield obedience to, reasonable, lawful authority."

"Action looking to the organization and instruction of classes in German, Latin, and Greek was taken in 1896. This course was in response to a call that it was thought best to heed. I am much pleased with the work that has been done. The number of students studying these languages is as large as was expected. Their instruction makes no interference with the regular scheduled work and entails but little expense upon the College."

"The stress of future effort in the educational work of the College should be in the direction of making that work as now planned and in operation more efficient. There is no pressing need of new departments of instruction. The field now occupied is broad enough; the want of more thorough cultivation is the one most clearly in sight."

"It is my hope to see more effective teaching in all branches that give general culture. Specialization should follow, not precede, the acquisition of that knowledge that is said to be common but which is sometimes so uncommon. The illegible manuscript, the bad spelling, and the incorrect language of the student can not be condoned because he is able to show some familiarity with the terms used in science or mechanics. The most practical education that can be gained is that which enables its possessor to acquire the printed and spoken thoughts of others and to give expression to his own in correct English."

Grounds and Buildings.

The college land touches the city of Fort Collins on the south. In the northeast corner of the grounds are to be found the various college buildings. Most of the 240 acres owned by the state is given up to farm operations, general and experimental. The ground immediately adjacent to the college buildings is made use of by the horticultural department in the prosecution of its special lines of work. The lawns about the buildings have an abundance of ornamental shrubbery with here and there flower-beds upon which the skill of the florist has been exerted with pleasing effect. The drives through the farm are thoroughfares at all times of the year. These drives are kept clean and well-rolled and, being well shaded in summer, are much frequented by those seeking out-of-door recreation by riding or driving.

The college authorities draw a long breath of relief in announcing the completion of the new chemical laboratory. Two years ago a legislative appropriation for the completion of this building was asked. It was not granted, and every dollar required for putting this building at the service of the state, both

in educational work and in furthering the work of the experiment station, in which our farming communities are so deeply and vitally concerned, was taken from the regular mill-tax fund for the general support of the College. The building stands, to-day, a testimonial of the business capacity of the members of the state board of agriculture. Department equipments and library additions have suffered by reason of the rigid economy in the handling of college funds, but it were better thus, possibly, than to face the needed efforts of a new fiscal year with a debt burden to carry. A brief description of the building that has cost the college management so much anxiety is here-with given:

"The new laboratory building is designed after the French Renaissance style of architecture, with the individual grace and picturesque effect of the old French chateaux. It appears in pleasing contrast with the Romanesque structures in the midst of which it is erected. It is constructed of red sandstone rubbed and smoothed. In the interior arrangement, convenience and facility for carrying on efficient chemical analysis are kept in mind."

"To the left of the main loggia, on the first floor, is the professor's suite of rooms, including office, balance room, and private laboratory—the latter being provided with hoods and direct communication with the storage room in the basement."

"To the right, the stairway leads to an entrance on the second floor. Here are the assistants' quarters—office; experiment station laboratory, with balance room and hoods; storage room; and nitrogen room containing two hoods."

"Directly in front of the main entrance to the loggia, is the qualitative laboratory, 30x38 feet, supplied with working desks large enough to accommodate thirty-two students. This room is provided with nine hoods, storage room and balance room. This room being an inside room, is lighted by a large skylight in the roof—a superior system of lighting when the work to be done is considered."

"To the left of the laboratory, and behind the professor's rooms, is the quantitative laboratory arranged to accommodate twelve students. It is furnished with six laboratory desks, two hoods, and a balance room."

"All laboratory desks throughout the building are made of quarter-sawed oak tops and butternut sides, drawers, doors, etc. The sinks are placed at the sides of the laboratories. Each desk is provided with gas and water supplies, also a two-inch waste, flush with the top of the desk and supplied with a rubber plug.

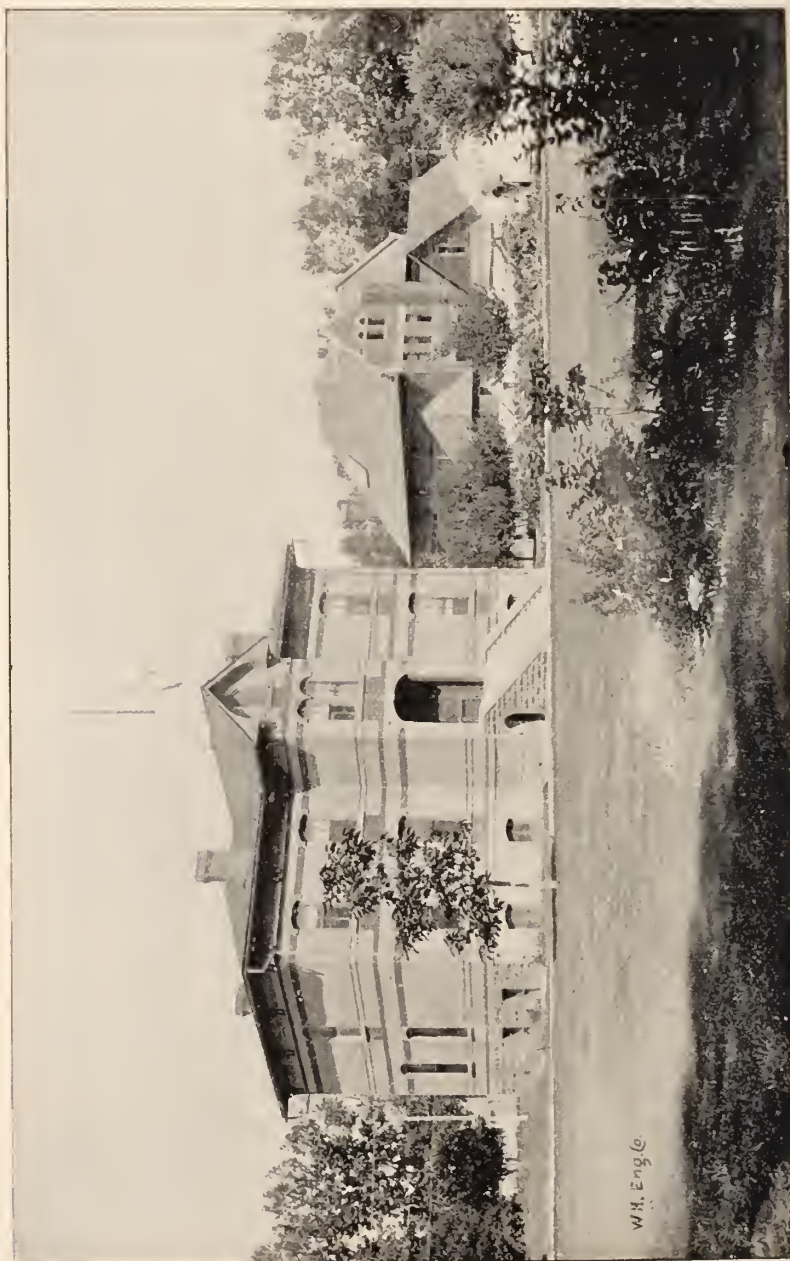
This waste takes the place of sinks in the desk and eliminates much uncleanness usually connected with the work. The hoods are furnished with gas and water supplies; there is also a large hood, provided with slides on both sides, making the transfer of apparatus rapid and convenient. There is connection, also, with the museum and chemical cabinet. The geology lecture room is connected with the microscopical room and the museum. The basement is used principally for storage and heating purposes, gas generation, and some analytical work."

As soon as the building that had so long served the department of chemistry was vacated, plans were suggested for its remodeling to render it suitable for the use of the "Business College." The expenditure of less than one thousand dollars has so changed the building as to make it serviceable in accommodating all the classes of the commercial department. The interior now presents a sightly appearance. The removal of partitions and other adjustments of space have given four class rooms and an office. Classes in bookkeeping meet in one room; those in banking practice in another; those in typewriting and stenography, in another; while the last room—a well arranged general classroom—gives ample quarters for classes in spelling, commercial arithmetic, commercial law, business geography, etc. The building is heated by steam, is well lighted and ventilated, and has every convenience for the right carrying on of the work of the department for whose use it has been put in order.

A "Mechanical Department" was created in 1882. Its work was carried on in the basement of the main building, immediately beneath the present library room, until the following year when a building better designed for the use of the department was erected on the northwest corner of the campus. This building has been remodeled and enlarged until it now covers a large area. Here is to be found the machinery and other equipment, made of highest utility in prosecuting the well-planned and varied work of the present department of mechanical engineering.

In the summer of 1898, a new 80-horse power boiler was put in place at a cost of \$1,100.00. The old boiler had outlived effective service and was a menace to life and property. The new one is of approved design and good workmanship and will furnish all the power needed to run the extensive plant.

The need of a building suitable for carrying on laboratory experiments in mechanical engineering has long been felt. Through the generosity of some public-spirited citizens of Fort Collins that need will exist no longer. Voluntary contributions



CIVIL AND IRRIGATION ENGINEERING BUILDING.

have been made to a fund that is now large enough to assure the speedy completion of a building for special experimental and practical work in advanced mechanics. The purpose of the building and its general appearance are set forth in an article recently published in "The Rocky Mountain Collegian," a paper devoted to student interests, from which quotation is made:

"The laboratory idea is one of the strong features of the College. The mechanical engineering department has gradually been brought to a high degree of usefulness, and those who have watched the growth of this branch of the college work have become much interested in it, and it has become a feature which is very attractive to those who visit the institution. The students who have taken up this line of work have, for the past two or three years, been given considerable advanced work, and original investigations and experiments have been undertaken with the limited accommodations at hand; so valuable to the students has this work proved, and so earnestly have they desired it and taken hold of it, that much encouragement was felt still further to furnish the necessary accommodations to do work similar to that of the older and larger institutions of the country."

"The object of the work of the laboratory is to give the advanced students an opportunity to make investigations of the physical properties of materials of construction entering into buildings, machinery, and other structures; and also to make tests and examination of different kinds of boilers, engines, motors, pumps, and all kinds of mechanical appliances which may be obtained for the use of the department. This opens up a splendid and valuable field to the students of the College, not before available, and the experiences obtained here will be of inestimable value to them. Other institutions of this kind throughout the country are rapidly providing conveniences for this work, and our own institution is to be congratulated for keeping in the van."

"The work does not interfere in the least with that of any other department, but is an added help for the department for which it is designed. Nor does it disarrange the plans of the mechanical engineering department, but enables the work to be extended in a most satisfactory manner. A number of pieces of apparatus had already been given, by generous parties, for carrying on this work before the possibility of a building was known."

"The building will be situated directly south of the present mechanical engineering building and will be known as the me-

chanical engineering laboratory. It will be 40 feet wide and 60 feet long, and built of brick."

The latest inventory of college property shows a total value of \$253,288.73. The lands, buildings, and equipments, of the experiment stations foot up a total of \$25,627.00. The total value of all state property now under the control of the state board of agriculture is, therefore, nearly \$279,000.00. All this property has been secured from drafts upon the mill-tax fund, voted for general college maintenance, save \$49,500.00 voted by the legislature for the erection of college buildings and \$2,500.00 appropriated by the same body for the establishment of an experiment station at Cheyenne Wells.

College Finances.

The sources of college revenue have been frequently explained. The financial support the college receives from Colorado has been growing less of late years. The mill-tax fund—one-fifth mill on the dollar—for college support is levied upon the assessed value of the taxable property of Colorado. This assessed value has undergone some queer changes in the last seven years as the figures herewith given will show:

Year.	Assessed Value of Property.
1892	\$236,884,449 48
1893	238,722,417 05
1894	208,905,379 15
1895	201,308,969 10
1896	206,598,561 00
1897	197,276,446 00

The last compilation of assessments, that for 1898, shows that the total taxable property of the state is assessed, in round numbers, at \$187,000,000.00. Within the last five years the assessed valuation of property subject to taxation has fallen off more than fifty million dollars. This means an annual loss of state revenue, for college support, of more than \$10,000.00. In June, 1892, the total enrollment of students was 146, much less than half that reported in June, 1898. Thus, while student enrollment is increasing rapidly, state revenue for college maintenance is becoming less every year. This loss of revenue would have been a more serious matter for the College had not the income received from the government endowment funds been somewhat augmented each year.

The first act of congress, under which the College now receives an annual income somewhat definite, was passed in 1862. Colorado, under the provisions of that act, received 90,000 acres of land as an endowment of the State Agricultural College. Most of the land has been sold, and the sale proceeds form a permanent endowment fund amounting (October 1, 1898) to \$68,612.09. This permanent fund is under the control of the state, and the College revenue therefrom is the interest the state pays for its use. From the land unsold, and from interest upon sums due upon lands sold but not yet paid for, the College receives a further revenue amounting to no sum that can be definitely stated.

The congressional act of 1890, for the further endowment of colleges of agriculture and the mechanic arts, has within the last biennial period given the College \$47,000.00.

A summary of receipts for college support, within the last two years, is as follows:

Land income fund (act of congress, 1862).....	\$ 14,000 00
Additional endowment fund (act of congress, 1890).....	47,000 00
Mill-tax fund (state).....	70,000 00
<hr/>	
Total for two years.....	\$131,000 00

The government appropriations, under the provisions of the "Hatch Act," 1887, for the exclusive support of the experiment station, within the same two-year period, have been \$30,000.00. No part of this fund is available for college support.

There is pressing need of such legislative action as will place the handling of all college revenue more directly in the hands of the college authorities. At present, the state treasurer is the custodian of all college money save that received from the government for experiment station support. To say that the present plan is not entirely satisfactory is to put it in mild form. The present plan of permitting the state treasurer to handle the revenue of the College, as its treasurer, is favored by those who have been taught to believe that a great interest saving to the state results from it. This argument has no just basis in fact. The mill-tax fund, the product of state taxation, is used up about as fast as it comes into the hands of the state treasurer. Were any accumulation of this fund to be in possession of that official, he could not, by its investment, make an interest-bearing fund of it, because he can not know, with any certainty, when its disbursement, in redemption of vouchers of indebtedness duly issued by the state board of agriculture, will be neces-

sary. There is no state fund of the College that can, with safety, be made interest-bearing. There is a fund, however, that can be made to yield an interest revenue, and that is the fund voted by congress, under the provisions of the second "Morrill Bill," 1890, for the further endowment of the College. This annual appropriation, \$24,000.00 for 1898, comes in the shape of one draft annually, upon the treasury of the United States. The college drafts upon this fund are made monthly. Being of nearly equal amounts throughout the year, they can be fairly estimated in advance by the custodian of the fund upon which they are drawn. At the time of the writing of this report, the fund referred to has several thousand dollars to its credit. This credit is looked to for the means, in part, of college support up to the close of the next government fiscal year, June 30, 1899. I assert that this is the only college fund that can be made safely available for the production of interest. I assert, further, that if the college has ever received one cent of interest revenue from this fund I have been misinformed. The state of Colorado can have no just claim to any interest which the government appropriations for college support may earn. Fair-dealing would suggest that all interest earned by such appropriations should be for the sole use of the college. The way to reach an equitable solution of this whole matter is to enact a law empowering the state board of agriculture to select its own treasurer—with proper safeguards as to bonds, bondsmen, etc.—and to make this official the custodian of all college funds just as soon as the same may be available for use.

The plan of having a local treasurer to receive and disburse the experiment station fund has ever worked without friction. Not one cent of this fund has even been misappropriated or lost. The financial statements of this officer have never met with rejection or criticism by the authorities at Washington. There is no reason to fear that this officer who has handled the experiment station revenues so satisfactorily would prove untrustworthy were he made the custodian of other funds, subject, as far as their expenditure is concerned, to the control of the state board of agriculture.

The Experiment Station.

The "Hatch Act" of 1887 gives an appropriation of \$15,000 annually for the support of an experiment station connected with the colleges established under congressional act, approved July 2, 1862—the first "Morrill Bill." Legislative action by our own state places the government experiment station fund under

the direct control of the state board of agriculture and recites that its use shall be for the "benefit of the agricultural experiment station department of the State Agricultural College." (Session Laws, 1889, p. 162.) It is thus seen that, in Colorado, the experiment station is made a college department. Its relation to the College, then, is that of every other department, neither more nor less. President H. C. White, of the Georgia State College of Agriculture and Mechanic Arts, speaks of the union of the school of agriculture and the experiment station with the college proper in the following language:

"The school of agriculture should be the clinic of the college. In a manner, it should bear the same relation to the college that the hospital bears to the college of medicine. It should be primarily designed for those who have already received, or are at the same time receiving, the educative culture of the college proper, and it should not undertake to duplicate, or infringe, upon the pedagogic work of the college. * * * The illustrative work and training of the college farm and its attachments should be distinct from the research work, in the several lines, of the experiment station. It is, unquestionably, eminently advantageous and desirable that the station should be intimately associated with the college, particularly for the sake of the station, but for the sake of the college as well. For that matter, an investigator in one might very well (and preferably) be a teacher in the other, and advanced or graduated students of the college might be admitted to participation in the researches of the station; but the work in each should be distinct, and while they should coöperate and aid each other whenever possible the distinctive purposes and functions of each should be carefully discriminated."

The work of the station has been prosecuted under the direction of the executive committee of the state board of agriculture. Possibly more and better effort has been given to it within the last two years than formerly within any like period. A report is issued each year. Bulletins are issued from time to time, and widely distributed. Since the preparation of the last biennial report, fourteen of these publications have appeared. The number, title, and author of each are herewith shown:

36. Sugar Beets, W. W. Cooke.
37. (Technical Series No. 2.) The Birds of Colorado, W. W. Cooke.
38. I. Sheep Scab. II. A Few Insect Enemies of the Orchard, Clarence P. Gillette.

39. A Study of Alfalfa and Some Other Hays, William P. Headden.
40. Barley, W. W. Cooke.
41. Blight and Other Plant Diseases, C. S. Crandall.
42. Sugar Beets in Colorado in 1897, W. W. Cooke and William P. Headden.
43. (Technical Series No. 3.) I. Colorado Lepidoptera. II. A Few New Species of *Deltoccephalus* and *Athysanus* from Colorado. III. A List of Original Types, etc., in Collection, Clarence P. Gillette.
44. (Technical Series No. 4.) Further Notes on the Birds of Colorado, W. W. Cooke.
45. The Loss of Water from Reservoirs by Seepage and Evaporation, Louis G. Carpenter.
46. A Soil Study: Part I. The Crop Grown: Sugar Beets, William P. Headden.
47. Colorado's Worst Insect Pests and their Remedies, Clarence P. Gillette.
48. Losses from Canals from Filtration or Seepage, Louis G. Carpenter.
49. Meteorology of 1897, with Illustrations, Louis G. Carpenter.

Military Instruction.

Instruction in military science and tactics is a necessary part of the work of a land-grant college. In the enumeration of subjects to be taught, as prescribed in the act of 1862, are found the words, "including military tactics." An amended act of congress gives the president of the United States authority to detail officers from the army and navy to act as professors of military science in certain institutions of learning having capacity for the education, at the same time, of not less than one hundred and fifty male students. In making such details, the president is required, first of all, to provide instructors for the colleges established for the benefit of agriculture and the mechanic arts.

The first detail, under the act referred to, was that of Warren H. Cowles, first lieutenant Sixteenth Infantry, United States army. Lieutenant Cowles was relieved from duty, at his own request, July 1, 1890. He was succeeded by John C. Dent, captain Twentieth Infantry, United States army, who served until the opening of the fall term of 1893. Harry D. Humphrey, first lieutenant Twentieth Infantry, United States army, supervised the military work four years, retiring in August, 1897, by rea-

son of the expiration of a detail that had reached the legal limit. William C. Davis, first lieutenant fifth Artillery, United States army, assumed the duties of military instructor with the opening of the fall term of 1897. Immediately following the declaration of war with Spain this officer was ordered to rejoin his command, since which time the work of the military department has been supervised by the president of the college, assisted by the commissioned officers by him appointed. Definite information as to the future detail of an officer to act as professor of military science can not be had by correspondence with the war department. It is probable that, when terms of peace have been agreed upon and ratified, an officer will be detailed, as heretofore, and that all military exercises will follow along the usual channel.

On September 12, 1898, an inquiry was sent out from the office of the inspector general, war department, Washington, D. C., to the authorities of the land-grant colleges, calling for statements and statistics showing the participation of the students and ex-students of such institutions in the war with Spain. Herewith are given the names of students and ex-students of the State Agricultural College of Colorado who gave their country service in that brief but decisive struggle:

Graduates—

1. Archie Jesse Harris, (Fort Collins, Colorado), second lieutenant, Second Infantry, United States army, now at Montauk Point, New York. This enlistment was a result of the action of the war department whereby students of meritorious standing in military service in certain institutions of learning were made eligible to a commission in the regular army.

2. Edgar Avery Mead (Greeley, Colorado), sergeant Company D, First Regiment Colorado Volunteers, now at Manila.

3. Richard Appleton Maxfield (Rifle, Colorado), sergeant Company I, Second Regiment United States Volunteers, Engineer Corps, now at Honolulu.

4. Grafton St. Clair Norman (Hamilton, Ohio), sergeant Company K, Eighth Infantry, United States army, now at Fort Thomas, Newport, Kentucky.

Undergraduates and Ex-Students—

1. Frank D. DeVotie (Greeley, Colorado), sergeant Company D, First Regiment Colorado Volunteers, now at Manila.

2. Neil Carmichael Sullivan, Jr. (Longmont, Colorado), sergeant Company H, First Regiment Colorado Volunteers, died at San Francisco, California, June 4, 1898.

3. John McMillan (Fort Collins, Colorado), Seventh Infantry United States army, wounded at San Juan.

4. William B. Sexton (Fort Collins, Colorado), Company G, Twentieth Kansas Volunteers, Engineer Corps, now at San Francisco, California.

5. James Pullar (Fort Collins, Colorado), Company G, Eighth Infantry, United States army, now at Montauk Point, New York.

6. Simon Moses Marks (Buena Vista, Colorado), Company F, First Regiment Colorado Volunteers, now at Manila.

7. Joseph Clinton Holtschneider (Buena Vista, Colorado), Company A, Twentieth Infantry, United States army, was at Santiago; is now at home on a furlough for sickness.

8. Francis Virgil Leroy McCandless (Florence, Colorado), corporal Company A, First Regiment Colorado Volunteers, now at Manila.

9. Perry Hjalmer Nyberg (Pueblo, Colorado), sergeant Company A, First Regiment Colorado Volunteers, now at Manila.

10. Robert James Potter (Gunnison, Colorado), Company F, First Regiment Vermont Volunteers, at present at home on furlough.

11. John Thomas Richards (Erie, Colorado), Company F, First Regiment Colorado Volunteers, now at Manila.

12. Benton Sylvester (Berthoud, Colorado), Second United States Volunteers, Engineer Corps, now at Honolulu.

13. George Washington Springer (New Windsor, Colorado), Company D, First Regiment Colorado Volunteers, now at Manila.

14. Everett Washburn Taylor (Fort Collins, Colorado), corporal Company G, First Battalion Wyoming Volunteers, now at Manila.

15. Fred Montgomery Westlake (Florence, Colorado), lieutenant Second United States Volunteers, Engineer Corps, now at Honolulu.

16. Guy Surinus Hooper (Greeley, Colorado), second United States Volunteers, Engineer Corps, now at Honolulu.

17. Henry E. Voegeli (Cincinnati, Ohio), First Illinois Infantry, United States Volunteers; service at Santiago; now on furlough, Chicago, Illinois.

Doubtless the list of names is incomplete. Effort will be made to secure other names for this roll of honor, as it may be fittingly called. Considering the fact that hundreds of young men have at some time received instruction in military science at the college, it might seem, at first glance, that few college representatives, comparatively, rendered service in the war.

When that war was an assured fact, there were present, at the college, not less than two hundred well-drilled cadets of age and strength such as to fit them for efficient army service. Neither government nor state seemed to have need of their service. The only way in which these cadets could get into the regular or volunteer force was to abandon the military organization to which they belonged, and in which, perhaps, they had secured well-earned commissions, and enlist as privates in some other organization. To expect a commissioned officer, with some years of careful military training behind him, to enter, as private, a volunteer company officered by men of less military and scholastic ability than he himself possesses, is to look for something that rarely happens. A number of the college cadets, enough to form a single company, made tender of their service, with the single condition that their organization as such be accepted; but their effort to secure such recognition was futile. That so many college representatives found active and honorable military service in the various volunteer forces of the country, is a testimonial to the unselfish and patriotic spirit prompted and strengthened by the military discipline and general training of the college.

The general government has never given enough attention to the military organization at the college; the military authorities of Colorado have never manifested the slightest interest in it. While attempts of a vigorous nature have been made to organize companies of the national guard in different sections of the state, a military organization large in numbers and suggestive of efficient service in war emergencies has been practically ignored by our state military authorities.

The neglect, to which attention is herein directed, is no matter of necessity; it is the outcome of choice—choice manifestly antagonistic to the spirit, if not the letter, of the law.

The three sections of the act of the general assembly of Colorado, approved April 9, 1895, read as follows:

"Section 1. That, for the purpose of further carrying out the provisions of the act of congress approved July 2, 1862, in relation to agricultural colleges, the military body known as the Agricultural College Cadets, of the Colorado Agricultural College, is hereby organized as an auxiliary branch of the Colorado National Guard, placed upon the same footing as regards arms, ammunition, clothing, camp and garrison equipage as the Colorado National Guard."

"Sec. 2. That the proper officers of said Colorado National Guard are hereby authorized and directed to honor the requisi-

tions of the commanding officer of said Agricultural College Cadets, under such rules and regulations as may hereafter be prescribed by the state military board and the state board of agriculture, when countersigned by the president of said college for ten rounds of ammunition per year for each member of said military body, for such camp and garrison equipage as may be necessary for the proper instruction of said body in all that pertains to the practical duties of soldiers in camp."

"Sec. 3. The cadets of the State Agricultural College shall be attached to the Colorado National Guard, under such rules and regulations as may hereafter be prescribed by the state military board and the state board of agriculture."

If this law is not intended to secure an intimate connection between the college cadets and the national guard of the state, the reasons for its enactment are not readily apparent. It is desirable that early action to make effective the provisions of the law quoted be taken. A step in the right direction would be the issuing, under state authority, of commissions to the commissioned officers of the college battalion. Then, such inspection of the military work of this organization, by the proper officers of the Colorado National Guard, as would show interest in its existence and approval of its purpose, should be a matter of course.

**Purport of the Congressional Acts of 1862 and 1890, Better
Known as the "Morrill Bills."**

Quotations showing the best interpretation placed upon the educational provisions of those enlightened measures.

It is now more than thirty-six years since the first bill for establishing and endowing a "college of agriculture and mechanic arts," in the several states and territories of the Union, was enacted into a law by congress. Since then more than sixty institutions of learning have been established under the liberal provisions of that wise and beneficent measure. These institutions, while having a general aim, pretty well defined, vary greatly in the amount and kind of work upon which student activity is exerted. The trend of educational effort in most of these institutions is towards a more liberal culture of students—a higher standard of scholarship—and a training that will later place the student in more helpful contact with the great and diversified industrial interests of the country.

The information, regarding the workings of these new educational agencies, most needed by the people, is that which will bring clearly to their minds the paramount objects for the accomplishment of which these institutions were established and

the legitimate means to be employed in the attainment of these aims. As an interesting and instructive addition to this field of thought and discussion, briefly stated views of some eminent for service in the cause of popular education are herewith given.

In speaking of the educational significance of the movement that resulted in the establishment and endowment of the land-grant colleges, in an address delivered at the Massachusetts Agricultural College in 1887, Charles Kendall Adams said:

"It opened the whole realm of nature as the legitimate field of investigation and study. Before this time the work of the schools and universities had been confined to developing the minds of the pupil and the teaching of the four learned professions—theology, medicine, law, and pedagogy. Universities had been established in the twelfth, thirteenth, fourteenth and fifteenth centuries in all parts of Europe, but in no one of them were studies carried on in accordance with the modern investigating spirit."

And, again, in closing his address, he makes use of the following language:

"These are some of the lessons and some of the necessities that are taught by experience; and yet they are only hints, as it were, designed to show how vast is the domain that invites the careful study of our schools and colleges. It is into this domain that the people were invited by the wise land grant of 1862. It is in this domain that the colleges and universities founded on that grant, if they live up to their high behest, will accomplish results that shall be for the helping, if not for the healing of the nation."

Hon. Justin S. Morrill, whose honored name is inseparably connected with the Act of 1862, the *first* "Morrill Bill," followed President Adams in a striking address from which the following excerpts are taken:

"The existence of the colleges can alone be vindicated by reason that they are not superfluous but indisputably wanted; and that their work is not Utopian but practically of real service to the country. * * * The importance of long terms of human training for the professions of theology, law, medicine, and pedagogy has for years been held to be indispensable. But these learned professions, important as they are, numerically include only a small fraction, comparatively, of the human race; and, yet, it is hardly too much to say, that our ancient colleges and universities mainly provided instruction originally intended exclusively for those who sought to be equipped for these special classes. The great majority of mankind, therefore, lacking per-



CHEMICAL LABORATORY.

haps neither ambition nor native ability, were dependent upon the hap-hazard of self-culture, or upon being taught in some brief way in the district school how to read, write, and cipher. If this uncounted and unrepresented multitude sought to acquire knowledge of more practical value in the voyage of life, they soon found that useful knowledge was often estimated in ancient and richly endowed institutions to mark the humble station of steerage passengers, while the august institutions assumed to provide alone for passengers in the cabin, and, for them—having reluctantly abandoned the discipline of the ‘birch’—only an intellectual discipline, the efficacy of which no one disputes, though no less efficacy may be claimed in behalf of studies for scientific use than for classic ostentation. * * * The great army of industrious laborers in the field and workshop, in mines and factories, or on railroads and other business enterprises—ready at any time to give their lives in support of the liberties and union of the nation—had some right to more of sound and appropriate learning that would elevate and especially profit them in their respective future careers.”

“The school age of man is far too brief for the acquirement of all knowledge of philosophy, letters, and science, and where the dead languages have the primacy, there is little chance for the sciences, for modern languages, or even for our native tongue, or, indeed, for much, with scholarly thoroughness, in anything else. A mere smattering of the sciences, or of the ancient languages, is no more to be coveted than even the old absolute *unity* of all college education. The organic law of the land-grant colleges, therefore, made it a leading feature that instruction should be provided, *without ostracising anything*, in branches related to agriculture and the mechanic arts, upon which, as we all know, the greater number of mankind must rely for their subsistence and happiness, as well as for their growth and reputation among men.”

In the quotation last given the italics are my own. The words are deeply significant of what was in the mind of Senator Morrill when he introduced into congress the first measure that is best known by its author's name. The whole address from which these citations are made is a strong plea for industrial education in which the practical and cultural elements shall be happily blended. There is not a sentence of Senator Morrill's utterances, at the time named, that is not in fullest accord with the opinions expressed in the brief quotations given. Ten years later, 1897, Senator Morrill, writing from the senate chamber, Washington, D. C., to Director True, of the office of experiment stations, United States Department of Agriculture, says:

"I have to say that the Act of 1862 was intended to give those whose lives were to be devoted to agriculture or the mechanic arts, *or other industries*, embracing much the largest part of our population, some chance to obtain a liberal and practical education. The colleges in existence did not pretend to do anything more than to educate young men for the three professions of divinity, law, and medicine and surgery."

Again I take the liberty to italicize three words in the quoted extract.

At one time it was proposed to make the Agricultural College of Massachusetts a "living branch" of Amherst College. The latter institution was, doubtless, in need of a "living branch;" but the state's obligation to the masses of the people, and to the general government as well, would have been imperfectly fulfilled had the proposed union of the two institutions been consummated. Hon. Charles G. Davis, who gave a masterly historical address on the occasion twice before referred to, had this to say of the proposed connection of the institution authorized by the Act of 1862 with the classical institution at Amherst:

"I have never been able to see how the state could 'support and maintain' a college if it is made an annex to another college. How can the state send its board of agriculture as overseers to another corporation? 'At least one college.' If an agricultural college, so-called, is located in the vicinity of another college, it still can not be another college unless it rests upon a separate foundation, with independent and distinct professors throughout; and, if so, there can be no saving of expense by any such conjunction as can be made under the law."

The following tersely expressed opinion of the best reason why the farmer's son should go to the land-grant college, is from the pen of Dr. A. C. True whose efficient labors have done so much to promote the value of experiment station work in the United States:

"The boy does not go to an agricultural college to practice the ordinary operations of a farm as a means to provide support for his schooling or simply to learn the art of agriculture. He is to be taught not only how to do things, but why he should do them, and he should be so taught that when his college course is over, he will not be merely familiar with the ordinary routine of farm work, but will be able to plan such work in a progressive way, to take advantage of all that can be learned from the investigations of experiment stations and other scientific institutions working in behalf of agriculture, and to direct the labor of others in the most approved and profitable

way. Not only must the agricultural college supply the demand for trained managers of our larger agricultural industries, but it must also train men for positions in our experiment stations, colleges, and in that increasing number of industries related to agriculture where scientific training is necessary to the highest success."

The proceedings of the college section of the Association of American Agricultural Colleges and Experiment Stations, at the tenth annual convention of that body, held in Washington, D. C., in November, 1896, were marked by the presentation of a number of papers on the question, "What shall be taught in our colleges of agriculture?" G. T. Fairchild, then president of the Kansas Agricultural College, opened the discussion by reading a paper from which a few characteristic extracts are taken:

"Unless the colleges of agriculture reach a considerable body of farmers with their liberalizing education there is little hope for a scientific agriculture. * * * It is absolutely essential that the way from the farm to the college shall not be interrupted. The city high schools do not and can not furnish the true line of training for the farm boy whose every sympathy is in the field and forest and farmyard. The trend of secondary schools is almost universally toward the need of the city in merchandise, manufactures, and professions. * * * As fundamental in all study, a thorough training in the English language must stand first. If this is given through a comparison with other tongues I shall not complain, but the result must be English rather than linguistic information or grammatical expertness."

Then in order of importance as he sees it, President Fairchild names "an exacting study of mathematical principles and distinct application of these in quantitative sciences like chemistry and physics," the "descriptive sciences and the philosophies of organic life," the "art of expression," and a "training in manual dexterity."

President H. H. Goodell, of the Massachusetts Agricultural College, spoke, in part, as follows:

"More mind and less muscle is the watchword of to-day. In preparing the soil, in planting, in cultivating, in haying, in harvesting, in threshing, in the management of the dairy, in fact almost everywhere, intelligence is the principal thing, and mere brute force comparatively worthless. * * * The curriculum naturally divides itself into seven departments—the English, the agricultural, the chemical, the botanical, the mathematical, the zoölogical, and that of languages and social science."

H. J. Waters, director of the Missouri experiment station, followed in the discussion and made the following statements, among others:

"It is clear that no definite scheme of studies equally applicable to the needs and requirements of all states and to the peculiarities of the public and high-school system of the different states can be laid down. Nor is it, in my judgment, possible, except within very wide and general limits, to say what shall be and what shall not be taught in our agricultural colleges. * * * It appears to me to be a matter for each college to determine for itself whether it will attempt to take cognizance of all the important industrial interests or concentrate its efforts and funds upon a few of the more important ones. As to whether a given college shall offer courses in agriculture, mechanical, mining, civil, or electrical engineering, and domestic economy, or require all its students to pursue one course embracing the leading educational and industrial features contemplated in the law should be left to the properly constituted authorities of that college to determine. * * * By the letter of the law there is no restriction as to what the cultural subjects shall embrace—whether the classics, modern languages, psychology, or what not. While it is agreed upon every hand that in all cases provisions should be made in all courses for a reasonable amount of instruction that tends toward liberal culture, it is equally clear that the technical, the industrial, the useful instruction (those sciences relating to the several industrial pursuits) shall constitute the majors, in order that the training there imparted may be directed to some practical end."

H. C. White, president of the Georgia College of Agriculture and Mechanic Arts, emphasized much that had already been brought out in the preceding papers, in his address from which quotation is herewith made:

"Our institutions are to be educational establishments, not professional schools. They are to contribute to the drawing out and direction of the intellectual powers of the youth of the land—particularly of the 'industrial classes'—so that they may be properly fitted by 'liberal and practical' culture to engage in the 'several pursuits and professions of life.' * * * There is no warrant in law, or reason, for the distinctive designation of our colleges as 'agricultural' or 'mechanical.' I think it is a pity that the habit has grown among us. 'Land-grant' or 'State' or 'Science,' would be more fitting appellations if distinctiveness is desired."

The Act of 1862 "was intended to increase the learning of the youth of the land, to furnish them with intellectual powers and stores of knowledge applicable to industrial pursuits by providing liberally for the education, to that end, in order that, those who might engage in such pursuits should no longer be mere slaves of craft, but freemen in the intelligent prosecution of their chosen handiwork. * * * So far as the letter of the law is concerned, the strictest constructionist could not assert that anything having the faintest shadow of a claim to be considered a branch of education might not be taught in our colleges."

The opinions that the foregoing quotations present vary in degree, but not in kind. The consensus of opinion, regarding the necessity of a broad, generous literary culture, growing out of the instruction and training given the students of the so-called land-grant colleges, is very marked. Conditions in Colorado are very favorable for the realization of all that is best and most progressive in the congressional legislation, assent to which, coupled with wisely ordered legislative action, has given our state a college that stands well up to the front among the institutions of its class.

Needs—Conclusion.

One of the most evident needs of the many suggested to the mind of those conversant with our college management is an "Administration Building," as it may not inaptly be called. A new chapel, for assembly and public exercises, is a pressing want. It could find a place in the new building; as could an armory and a gymnasium, quarters for the library, rooms for the literary societies and Christian associations, offices for different persons connected with college administration, study rooms for students, reception rooms, and the like. A building as large as the new chemical laboratory, recently completed, would answer the needs of the college, in the matters referred to, for years to come. A state appropriation of \$30,000 would suffice for the erection of the building and its equipment for use.

The present condition of the College gives promise of an extended area of usefulness upon which it will enter in the not distant future. The forces for college betterment are held well in hand and will be directed with all the zeal and discretion at the command of those in authority.

Respectfully submitted,

ALSTON ELLIS,

President.

REPORT OF THE PRESIDENT OF THE STATE NORMAL SCHOOL.

Greeley, Colo., November 1, 1898.

To the Hon. Grace Espy Patton, State Superintendent of Public Instruction, Denver, Colorado:

Dear Madam—I have the honor to submit the fifth biennial report of the State Normal School of Colorado, for the period ending October 31, 1898.

HISTORY OF THE SCHOOL.

The Colorado State Normal School was established by an act of the legislature, in 1889. The first school year began October 9, 1890, and closed June 4, 1891.

At the beginning of the second year the school was reorganized somewhat, and the course extended to four years. This course admitted grammar school graduates to its freshman year, and others to such classes as their ability and attainment would allow.

At a meeting of the board of trustees, June 2, 1897, a resolution was passed admitting only high school graduates or those who have an equivalent preparation, and practical teachers to the regular course. This policy makes the institution a professional school in the strictest sense.

1. Under this policy the growth of the school has been very gratifying. The students are more mature; they have a higher scholastic training, being much better prepared to grasp the principles which underlie the science and art of teaching.

2. From an economic standpoint it was a move in the right direction. When we were doing work suited to a grammar grade graduate, we were duplicating work done in all the high schools in the state. The work we do now is strictly normal school work and is unique in itself.

3. The change met the unanimous approval of the educational people of the state. All are in hearty sympathy with what we are doing. The school is now truly the "Heart of the Public School System of the State."

The School has been in operation eight years. In that time 1,647 different students have been in attendance. The great majority of these are teaching in the public schools of Colorado.

The School has graduated 256. These are engaged in the public schools service of the state.

There are at present about 300 in the normal department, and 90 per cent. of them are from outside of Greeley. Most of the counties of the state are represented in the School.

NEEDS OF THE SCHOOL.

Owing to the reduced assessment of the valuation of the state, the school has been very materially crippled in its development. With an annual enrollment in the normal department of over 300, and in the model department over 200, and in the kindergarten of over 50, the one-sixth of a mill is insufficient to meet the running expenses.

There are no funds for the natural development of the school. The growth and development of the State Normal School lies very close to the hearts of the people, and when they recognize its wants they will be prompt in coming to its relief.

It is the people's institution. Its influence is felt in every school house in the state, whether it be in the city, in the hamlet, on the plain, in the valley, or on the mountain.

Summing up the needs of the institution:

Maintenance, \$5,000 more per annum.

Heating plant, \$10,000.

West wing to main building, \$25,000.

THE FUNCTION OF THE SCHOOL.

The function of the normal school is to make teachers. To do this it must not only keep abreast the times, but it must lead the educational van. It must project the future. There must be within it a continual growth in scholarship, power, culture, and influence; such scholarship, such power, such culture, such influence, as will grow strong men and women, equipped for the work of teaching. They must possess a scholarship consisting not in an accumulation of knowledge, but in a trinity of

knowledge, power to think, and culture. Such a trinity is the result of very careful training. It demands experts as teachers of the various subjects. Such the School has. Each one was selected because of his or her special fitness for the work of the department.

That phase of training with which the normal school has to deal is power to teach. To quicken and develop this power, appropriate stimuli and training are necessary. To know the child and how to lead it give rise to the proper stimuli. These stimuli consist in observing the activity of children, in observing expert teachers' work, in reading professional literature, and in the presence of a living teacher. Training results from a response to the above stimuli. For such a professional training the school is prepared. In short, the function of the school is to promote and elevate the teacher, and by so doing promote and elevate the profession of teaching, which will result in the rise of the general intelligence and culture of the people of the state.

There being no antecedents to fetter the development of the institution, the management has, from the beginning, aimed to make it progressive and formidable in the educational movements of the state and country. It is dominated by the most progressive spirit. It is not a slave to any man, method, or philosophy. It seeks to select the best from all and use it in its own investigations and operations. The basis of all work is experiment and research. Nature, books, and a living teacher beget a living pupil.

COURSE OF STUDY.

There are four immediate agencies involved in education: The teacher, the child, nature, and man. A classification of the facts, the principles, and the laws which are embraced in their "Inner Connection" constitutes the science of pedagogics. This "Inner Connection" exists among objects of nature, among the various processes of the mind, among people, and between nature and mind. That a teacher may understand this inner law, he must have a knowledge of nature, mind, people and their relations. Out of it arises an understanding of the training necessary for his preparation. It suggests a course of study.

The central agency is the child; it is a living, mental, spiritual entity. It has a body, a mind, a soul. The body requires food, exercise, and training, that it may grow, strengthen, and become skilled—that it may develop. The mind requires knowledge, thinking, and training, that it may grow, strengthen, and

become cultured—that it may develop. The soul requires piety, devotion, and worship, that it may grow, strengthen, and become spiritual—that it may develop.

A knowledge of body, mind, and soul embraces:

1. A knowledge of the body as a whole, its organs, their functions, and the laws which regulate physical growth and development.

2. A knowledge of the mind as a whole, its nature, its powers, their functions, and the laws which regulate mental growth, discipline and culture.

3. A knowledge of the soul, its nature, its powers, and the laws which regulate moral growth and spiritual development.

The teacher must have a keen insight into the triple nature of this reality—the child, that he may work intelligently and efficiently in his profound mission. He should recognize the body as a phenomenon of life, and mind as a phenomenon of spirit. Such a preparation as indicated above is the result of the threefold nature of development. It is training of the hand, the head, and the heart.

In accordance with the above analysis, the following course of study is outlined:

A teacher should know the relation of food to growth, of exercise to health and strength, and of training to physical culture. This implies an understanding of physiology, hygiene, and gymnastics.

He should know the relation of nerve, mind, and muscle to speech and manual dexterity. This implies a knowledge of language, manual training, and physiological psychology.

He should know the relation of a child's development to nature, or its surroundings. He should recognize that the mind is quickened through the senses, that there must be action and reaction of the forces without and within the child. He should be able to lead a child to interpret its surroundings. A child must see the sparkling minerals and flowering plants; it must hear and see the buzzing insects and the singing birds; it must smell the fragrance of the rose that it may know, admire, and act. This embraces a knowledge of science.

He should recognize that the deeds, sayings, feelings, thoughts, and aspirations of the race and age quicken the intellectual and moral natures, and, while they serve no particular end, they belong to culture in its universal character by giving the stage on which the drama of the world's life is revealed. This embraces a knowledge of history and literature.

He should know the relation of knowledge, of mental growth, of thinking, to mental power and culture. This implies a knowledge of psychology.

He should know the relation of example, precept, and principle to moral growth, of moral action to moral power and righteous living. This implies a knowledge of ethics.

Out of a study of nature arises the notion of number and space relations—hence a knowledge of mathematics.

God touches a human soul through the true, the beautiful, and the good—the true for the understanding, the good for the will, and the beautiful for the imagination. Through the imagination we have the world of art, having its foundation in the senses, as in color, form, and sound. Color is the unit concept of painting, form of sculpture, and sound of music. To some extent these should form a part of every liberal education; as in modeling and moulding and leading up to work in color. Again, music should have a place in the course of study which aims to prepare teachers. It is the most profound form of expressing the feelings of the depths of the human soul. It inspires us with hope and faith. It lifts us nearer to God. It should have a place in every course of study involving the education of the young and of those preparing to teach. We then include art in our curriculum of study, not as embraced in literature, but as found in drawing and painting, modeling, construction, and music.

A teacher should understand his relation to society and to the government under which he lives. This implies a knowledge of civics and economics.

Summarizing the above it would seem that those who are preparing to teach should receive pedagogical training in the following lines or centers of physical, mental and ethical activity:

Man in Himself.

Embracing physiology, psychology, ethics, religion.

Man in the Race.

Embracing history, anthropology, literature.

Man in Nature.

Embracing biology, physics, chemistry, physiography, astronomy.

Man in Society.

Embracing economics, government, home, sociology.

Man in Expression.

Embracing language, drawing, construction, music, painting, art.

Man in School.

Embracing school economy, history of education, philosophy of education, science of education, art of teaching, art of management.

TERM SCHEDULE.**Spohomore.**

Fall Term—Algebra (4)*, geometry, zoology and botany, history and English (4), Latin (4), elocution and Delsarte (2), society work.

Winter Term—Algebra (4), literature and English (4), zoology—botany, geometry (4), Latin (4), elocution and Delsarte (2), society work.

Spring Term—Algebra (4), fiction and English (4), botany and zoology, geometry (4), elocution and Delsarte (2), Latin (4), society work.

Junior.

Fall Term—Physiography (4), psychology (4), Latin (4), history and English (3), elocution and Delsarte (2), drawing and sloyd, society work.

Winter Term—Physiography (4), psychology (4), Latin (4), literature and English (3), elocution and Delsarte (2), drawing and sloyd, society work.

Spring Term—Physiography (4), psychology (4), Latin (3), literature and English (3), elocution and Delsarte (1), drawing and sloyd, society work.

Senior.

Fall Term—Physics (4), philosophy of education (4), model practice, music (3), and English (2), mathematics (4), Delsarte (2), society work.

Winter Term—Physics—Chemistry (4), philosophy and history of education (4), model practice, music (3), and English (2), history (4), Delsarte (2), society work.

Spring Term—Chemistry (4), history of education (4), model practice, music (3), and English (2), history (4), society work.

* The numbers in parentheses mean the number of recitations per week.

BOARD OF TRUSTEES.

- Hon. J. W. McCreery, Greeley. Term expires 1903.
 Hon. Richard Broad, Jr., Golden. Term expires 1903.
 Hon. Thalia A. Rhoads, Denver. Term expires 1899.
 Hon. C. S. Thomas, Denver. Term expires 1899.
 Hon. R. W. Corwin, Pueblo. Term expires 1901.
 Hon. N. B. Coy, Colorado Springs. Term expires 1901.
 Hon. Grace Espy Patton, state superintendent of public instruction, Denver. Term expires 1899.

Officers.

- Richard Broad, Jr., president.
 A. J. Park, secretary.
 C. H. Wheeler, treasurer.

FACULTY.

1897-1898.

- Z. X. Snyder, Ph. D., president, philosophy and practice of pedagogy and mathematics.
 James H. Hays, A. M., vice president, Latin and economics.
 Elma Ruff Todd, M. Ed., preceptress, history, literature, and English.
 N. M. Fenneman, A. B., A. M., physical science, physics, chemistry, and physiography.
 A. E. Beardsley, M. S., biology.
 Sarah B. Barber, reading, elocution, and Delsarte.
 C. T. Work, M. Ed., sloyd and drawing.
 E. G. Dexter, A. M., experimental psychology and physiology.
 *A. P. Wills, Ph. D., physical science.
 J. F. Daniels, librarian and history of art.
 Edgar L. Hewett, Pd. B., superintendent model school and child study department.
 M. Nora Boylan, critic in model and music.
 Eleanor Phillips, Pd. M., critic in model.
 Lizzie H. Kendel, Pd. B., critic in model.
 †Mrs. Sarah A. Fenneman, critic in model.

* Resigned January 1, 1898.

† Assumed her duties January 1, 1898.

Laura E. Tefft, superintendent kindergarten.

A. L. Evans, landscape gardener.

Benjamin Stephens, engineer.

Thanking the educational people of the state for their interest, the faculty for its kindly support, the department for aid and encouragement, the board of trustees for their fidelity and liberality, I am, yours truly,

Z. X. SNYDER,
President.

ANNUAL STATEMENT OF THE COLORADO STATE NORMAL SCHOOL.

To the State Board of Education, Denver, Colorado:

Below please find report of the Board of Trustees of the State Normal School for the year ending July 31, 1898:

I. Number of Students, Names, Residence, Etc.

The whole number of students enrolled during the year:

Males	60
Females	243
Total in normal department.....	303
Model school.....	154
Kindergarten	45
Total enrollment.....	502

Their sex, residence, etc., being shown fully on pages 183-196, inclusive, in catalogue of 1897 and 1898.

II. The Attendance.

The average daily attendance, first term (estimate).....	96%
The average daily attendance, second term (estimate).....	95%
The average daily attendance, third term (estimate).....	95%
The average daily attendance for entire year.....	95%
Number of days in session during year, 190.	

III. Curriculum, Classification, and Departments.

For branches taught, and time devoted to each, text books, etc., we refer you to pages 25 to 154, inclusive, in catalogue of 1897 and 1898.

APPARATUS.

The apparatus of the school consists of physiological models and apparatus, physical, chemical, geographical, biological, and psychological apparatus, with new and complete laboratories for work and study.

LIBRARY.

The library numbers, including text books, books of reference, educational reports, etc., about 10,000 volumes.

IV. Number of Students in Each Department Class.

Senior	58	
Junior	120	
Sophomore	105	
Post-graduate	20	
	—	303
Model school.....	154	
Kindergarten	45	
	—	199
		—
		502

DIPLOMAS.

There were fifty-seven (57) diplomas granted, as follows:

Amsden, Elmer E., Groton, South Dakota.
 Ashley, Helen M., Denver, Colorado.
 Bartels, Bina, Pueblo, Colorado.
 Bryant, Fannie, Sedalia, Colorado.
 Burgess, Edith, Fort Collins, Colorado.
 Butler, May, Trinidad, Colorado.
 Butscher, Louis C., New Windsor, Colorado.
 Carlson, George A., Evans, Colorado.
 Clark, Fred W., Greeley, Colorado.
 Coover, (Mrs.) Carrie E., McPherson, Kansas.
 Coover, J. E., McPherson, Kansas.
 Cronkhite, Theodora, Berthoud, Colorado.
 Delbridge, Wychie, Greeley, Colorado.
 Dolan, Alice, Leadville, Colorado.
 Downey, Elijah H., Ava, Ohio.
 Farmer, Grace, Albion, Nebraska.
 Fowler, O. S., Goff, Kansas.
 Harrison, Virginia, Cañon City, Colorado.
 Hawes, Mary M., Greeley, Colorado.
 Hetrick, Grace D., Denver, Colorado.
 Hodge, Louise W., Pueblo, Colorado.
 Hogarty, Michaela, Greeley, Colorado.
 Howard, Ethel, Greeley, Colorado.
 Howard, Sadie, Greeley, Colorado.
 Howett, Edwin L., Flora, Illinois.
 Johnson, Minnie, Leadville, Colorado.
 Kridler, Grace, Denver, Colorado.
 Llewellyn, Sarah, Coal Creek, Colorado.

Lory, Charles A., New Windsor, Colorado.
 McCracken, Mary, Denver, Colorado.
 McKeehan, Cora, Cañon City, Colorado.
 Montag, Ida C., Como, Colorado.
 Morehouse, Geneva, Lamar, Colorado.
 Nash, Margaret, Silver Plume, Colorado.
 O'Brien, Emma L., Denver, Colorado.
 Putnam, Nellie, Fort Morgan, Colorado.
 Reeder, John M., Greenhill, Ohio.
 Richards, Carrie L., Burton, Illinois.
 Riddell, Fannie, Denver, Colorado.
 Ross, Hettie M., Montrose, Colorado.
 Scanlon, Mary, Lyons, Colorado.
 Sibley, (Mrs.) Bella B., Trinidad, Colorado.
 Smith, Helen Fay, Denver, Colorado.
 Stebbins, Helen H., Tampa, Florida.
 Stevenson, Mildred, Greeley, Colorado.
 Tate, Ethel H., Lakin, Kansas.
 Taylor, Nellie A., Fort Collins, Colorado.
 Thomas, Helen, Greeley, Colorado.
 Thomas, Kathryn, Denver, Colorado.
 Van Horn, George, Marion Center, Pennsylvania.
 Waite, Vesta M., Highland Lake, Colorado.
 Watson, Ola, Denver, Colorado.
 White, Walter, Greeley, Colorado.
 Wilkins, Emma T., Tinnath, Colorado.
 Williams, Mary E., Gunnison, Colorado.
 Wintz, Claudia, Colorado Springs, Colorado.
 Zimmerman, George, Allamont, Illinois.
 Suspensions, none.
 Expulsions, none.
 School in session, 190 days.

V. The Names and Number of Teachers.

Names and Department.	Time of Service.	Annual Salary.
Z. X. Snyder, President, Philosophy and Practice of Pedagogy and Mathematics.....	7 years	\$1,500 00
James H. Hays, Vice President, Latin and Economics	7 years	1,800 00
Mrs. E. R. Todd, Preceptress, History, Literature and English.....	6 years	1,500 00
E. G. Dexter, Experimental Psychology and Physiology	3 years	1,600 00
A. P. Wills, Physical Science.....	11-3 years	1,600 00

N. M. Fenneman, Physics, Chemistry and Physiography	6	years	1,600 00
A. E. Beardsley, Biology.....	6	years	1,400 00
Sarah B. Barber, Reading, Elocution and Delsarte. 6 1-3 years			1,300 00
C. T. Work, Sloyd and Drawing.....	6	years	1,450 00
Edgar L. Hewett, Superintendent Model School....	6	years	1,400 00
M. Nora Boylan, Assistant, Model School.....	4	years	900 00
Lizzie H. Kendel, Assistant, Model School.....	2	years	900 00
Eleanor M. Phillips, Assistant, Model School.....	1 2-3	years	900 00
Mrs. S. G. Fenneman, Assistant, Model School.....	1	year	900 00
Laura E. Tefft, Superintendent Kindergarten.....	6	years	1,500 00
Joseph F. Daniels, Librarian and History of Art....	2	years	1,000 00

VI. Other Employees.

A. J. Park, Secretary Board of Trustees.....	\$ 300 00
Chas. H. Wheeler, Treasurer Board of Trustees.....	100 00
Benj. Stevens, Janitor.....	720 00
A. L. Evans, Gardener.....	900 00
J. E. Coover, Assistant Librarian....	180 00
Assistant Janitor.....	600 00

VII.

For statement of financial affairs of the school, see statement marked "Exhibit B."

VIII.

The amount required for the ensuing year for the maintenance of the school is \$35,000.00 There should be an appropriation of at least \$15,000 for the purpose of putting in a better heating plant, and moving the boilers from under the school buildings, and \$25,000 for the west wing.

R. BROAD, JR.,

Attest:

President.

A. J. PARK,

Secretary.

State of Colorado, County of Weld, ss.

I, R. Broad, Jr., president of the State Normal School of Colorado, do solemnly swear that the foregoing statement is a true report of the affairs of said school for the past year, to the best of my knowledge and belief.

R. BROAD, JR.

Subscribed and sworn to before me this seventh day of November, 1898. My commission expires August 7, 1901.

ALMIRA C. WHITE,

(Seal)

Notary Public.

EXHIBIT "B."

Financial Statement of the State Normal School for Year
Ending July 31, 1898.

MAINTENANCE.

Receipts—

Balance on hand July 31, 1897.....	\$ 953 30
Received from taxes, 1-6 mill.....	29,738 89
Received from public school income fund.....	121 35
Received from fees, etc.....	1,400 00
	<hr/>
	\$32,213 54

Disbursements—

To faculty.....	\$23,077 26
To other employees.....	2,654 01
To library account.....	982 88
To reading room.....	494 73
To apparatus.....	77 00
To furniture	144 00
To laboratory.....	113 84
To sloyd.....	49 31
To model school.....	58 31
To kindergarten.....	3 15
To grounds.....	20 00
	<hr/>
	27,674 49

Expense—

Telephone	\$ 40 52
Trustees	287 30
Institute expense.....	283 81
Water tax.....	429 50
Fuel	695 28
Catalogue, 1896 and 1897.....	441 42
Advertising	192 15
Postage	327 39
Freight and express.. ..	219 31
Music	6 71
Printing, etc.....	118 35
Stationery	63 55
Commencement	105 00

Hack for kindergarten.....	91 10	
Merchandise	188 02	
Attorney fees.....	100 00	
Diplomas	125 00	
Paint and paper.....	85 00	
Floor oil.....	22 50	
Lumber	38 28	
Repairs	73 16	
Labor	16 35	
Laundry	15 50	
Typewriting	5 55	
Plants and seeds.....	7 02	
Photographs	9 75	
Paper	6 00	
Lawn dressing.....	16 50	
Crayon	9 90	
Sundries	145 44	
	<hr/>	4,165 36
To balance.....		373 69
		<hr/>
		\$32,213 54

ELEVENTH BIENNIAL REPORT OF THE REGENTS OF THE UNIVERSITY OF COLORADO.

To the State Superintendent of Public Instruction, Colorado, and to the Twelfth General Assembly:

The Eleventh Biennial Report, 1896-1898, of the State University, is herewith presented by the regents.

During the period covered by this report, in all ways the growth of the University has been substantial. There has been a marked development not only in numbers, but in all that pertains to standards, equipment, efficiency, and influence. The grade of students in all departments this year is favorably noted, and the superior preparation of a large per cent. of those entering the schools of law and medicine is encouraging.

The attendance of the University proper has increased six-fold in six years, that of the preparatory school threefold, and that of the University as a whole more than fourfold. The development of the University during the past six years may be marked by the following: The organization of the preparatory school as a distinct department in a building by itself, and securing the coöperation of the city of Boulder in its support; the establishment of a law school; the reorganization of the medical school; the opening of the school of applied science; addition of professors in the college; organization of graduate courses; opening of an allied school of music; donation of an art collection; donation of a very valuable mineral collection; large increase of library and apparatus; completion of Hale scientific building; construction of central heating plant; erection of an engineering building, chemistry building, gymnasium, wing of medical building, hospital; extensive improvements of grounds and buildings, including new stable; increase in revenue; closer connection with high schools throughout the state; coöperation of the press and citizens; beginning of denominational coöpera-

tion near the University; improvement in curricula, in efficiency, standards, reputation, and influence at home and abroad.

DEPARTMENTS OF THE UNIVERSITY.

College of Liberal Arts—Classical course, leading to the degree B. A.; philosophical course, leading to the degree B. Ph.; scientific course, leading to the degree B. S.

Graduate courses, leading to the degrees M. A., M. S. and Ph. D.

Colorado School of Applied Science—Civil engineering, leading to the degree B. S. (C. E.); electrical engineering, leading to the degree B. S. (E. E.)

Colorado School of Medicine.

Colorado School of Law.

Colorado State Preparatory School, conducted by the University.

ATTENDANCE.

The subjoined table shows the growth in attendance during the past few years:

Years.	University Students.	Preparatory Students.	Total.
1891-2	66	103	169
1892-3	129	158	287
1893-4	159	146	305
1894-5	204	192	396
1895-6	267	242	509
1896-7	324	276	600
1897-8	337	273	610
1898-9	400 (estimated)	300 (estimated)	700

The register of the graduates now shows the following figures:

College of Liberal Arts.....	124
Graduate courses.....	16
Colorado School of Applied Science.....	4
Colorado School of Medicine.....	78
Colorado School of Law.....	43
Honorary degrees.....	9
	— 274
Colorado State Preparatory School...	250
	— 324

GRADUATE COURSES.

Some notes from the new rules of the graduate department are presented:

The faculty of the graduate department consists of full professors in the college of liberal arts and others engaged in graduate instruction. One year's residence is the minimum time allowed for the master's degree, and three years' residence for the doctor's degree. The final steps for obtaining a master's or a doctor's degree are as follows: 1. The candidate submits his thesis to the professor in charge of his major subject, who reports upon it in writing to the graduate committee. 2. The candidate undergoes private written examinations by his instructors, who report to the graduate committee. The graduate committee then recommend for final examination. 3. The graduate committee appoint for each final examination an examining committee. The examination is under the direction of this committee so appointed; it is oral and open to members of the University faculties; it is not to exceed three hours. 4. The candidate reads and defends his thesis before the graduate faculty; the result is part of the final examination. 5. The graduate committee and the examining committee together by a majority vote determine the results of the examination and report the same to the graduate faculty. The graduate faculty recommend for a degree by a majority vote.

The aim of the graduate department is a standard that will be recognized by the best universities, hence its growth is carefully guarded. The doctor's degree is not conferred for mere faithfulness in the acquisition of knowledge; there must be also the power of scientific production.

The graduate students last year numbered twenty-nine. The secretary of the department, who is responsible for organizing the work and recording the progress of the students, is Professor James A. MacLean.

In 1897 the degree of M. A. was conferred upon Mary Louise Dransfield, B. S.—subject of thesis "Education in New England." In 1898 the degree of M. S. was conferred upon Arthur Eugene Beardsley, B. S.—subject of thesis "A List of the Protozoa Observed at Greeley." The degree of M. A. was conferred upon Perley Lamont Clark, B. A.—subject of thesis "The Progressive Secularization of the Public Schools;" Benjamin John Fitz, B. A.—subject of thesis "The Mystery Plays and Their Relation to Subsequent Literature;" Richard Holmes Powell, Jr., B. A.—sub-

ject of thesis "Shakespeare's Theory of Hamlet's Sanity;" James Hixon Van Sickle, B. A.—subject of thesis "Grading and Promotion with Reference to the Individual Needs of Pupils."

THE COLLEGE OF LIBERAL ARTS.

The attendance in the college has rapidly increased each year; it is 50 per cent. larger than in 1895-6, and has nearly quadrupled since 1891-2. The number of professors, instructors, and assistants in the college department is twenty-five.

The curriculum has recently been modified to include group electives. Of the 130 hours necessary for graduation, 35 hours, required, are common to the three courses; 20 hours, required, are characteristic of the particular degree B. A., B. Ph., or B. S.; 50 hours are group electives and 25 hours free electives. Thus nearly half of the college work is prescribed, while the remaining half is elective, but under a plan that secures a large measure of consistency.

By recent recommendation of the college faculty and vote of the regents "students in the college of liberal arts who aim at both the college degree and the degree of the law school may so choose their electives, under the direction of the faculty of the college of liberal arts, as to receive one year's credit in the three-years' law course." This arrangement will enable students to complete both the four-years' college course and the three-year's law course in six years. The plan is in accord with the tendency in the progressive universities and in the many colleges which provide electives that count for one or two years of law, medicine, or theology.

A year ago James E. Russell, professor of philosophy and pedagogy, was called to the deanship of the teachers' college, a department of Columbian university, at a salary of \$5,000. In January, 1898, Carl W. Belser, professor of Latin, died. At the close of the school year William J. Waggener, professor of physics, resigned on account of ill health. The University felt deeply the loss of these strong men. To fill the vacancies the following appointments were made: in place of Dr. Russell, Arthur Allin, Ph. D., Berlin, then professor of psychology and pedagogy in the Ohio university; in place of Dr. Belser, Fred B. R. Hellems, Ph. D., University of Chicago; in place of Prof. Waggener, William Duane, Ph. D., Berlin. One year ago Charles C. Ayer, Ph. D., Strassburg, was appointed professor of romance languages. Last semester Prof. John Gardiner, at his own re-

quest on account of ill health, was relieved of part of his work, and Francis Ramaley, Ph. D., University of Minnesota, was employed as assistant professor, the regular salary of the chair being divided between the two. The department of philosophy and pedagogy has been divided into the department of philosophy and the department of psychology and education. Francis Kennedy, Ph. D., Leipsig, has been made assistant professor of philosophy.

The policy of appointing graduate students at a nominal salary as assistants in departments has proved fairly satisfactory. Such assistant position is equivalent to a teaching fellowship.

After some experiments in freedom of student attendance on lectures, the faculty has appointed a committee on attendance with liberal powers. The results of this judicious oversight are very favorable.

The helpful relations with the high schools of the state have been maintained and strengthened. The increase in number and excellence of the Colorado high schools is remarkable, and yearly new schools are sending students to the University.

The department of pedagogy yearly gives a course of lectures to a large club of teachers in Denver.

SCHOOL OF APPLIED SCIENCE.

The school of applied science has enjoyed a remarkable growth during the past two years, the increase in students being about 110 per cent. The engineering building has been completed by the addition of a second story, giving excellent facilities for instruction. The wing formerly used for a gymnasium has been devoted to shop work. The department of civil engineering has this year received a new impetus. The department of electrical engineering has added a new planer, lathes, wattmeters, testing instruments, electro-dynamometers, work benches, tools and small machines. An excellent photometry room, well equipped, has been constructed for the testing of arc and incandescent lamps. Last year an electric motor was constructed by the students in the shop.

The engineering departments need additional machinery, apparatus and books and larger equipment in the shops to accommodate the increased number of students.

All the graduates of the school thus far have secured good and remunerative positions.

SCHOOL OF MEDICINE.

From September, 1892, to September, 1897, the work of the last two years of the medical school was conducted in Denver. In June, 1897, the supreme court denied to the State University the privilege of conducting a part of its medical work in Denver, since which time the entire course has been given at the University.

The courses scheduled in the medical department, leading to the degree of doctor of medicine, extend through four years of nine months each. The first two years are given to scientific studies as a foundation for medicine. The third year is given to demonstrations, methods of physical diagnosis, and clinics. The fourth year is given to didactic and clinical lectures, and hospital and free dispensary work. In scientific laboratory work the school has recently been made especially strong. The biological, anatomical, chemical and medical laboratories are large and well equipped. Laboratory courses are given in qualitative and organic chemistry, histology, chemical and experimental pathology, bacteriology, hæmatology, pathological histology, pharmacognosy and anatomy.

By a liberal subscription of \$8,000 from the county and the city of Boulder, an appropriation of \$5,000 from the board of regents and various contributions from citizens, a large three-story hospital has been erected on grounds adjacent to the campus and near the medical laboratories. This will soon be fitted up in a most complete manner. The location on the bluff overlooking the river, city and surrounding country is unsurpassed in the state. Dr. William H. Riley, professor of nervons and mental diseases, from his position as medical superintendent of the Colorado sanitarium, is able to furnish many interesting and instructive clinical cases. A free dispensary has been opened in the medical building.

Inasmuch as the first year's work in dentistry is the same as that in medicine, students of dentistry who wish to take their first year's work in the University of Colorado can do so with great profit. The dental department, which was opened in September, 1896, retained its organization after the decision in the University case and obtained a new charter under the title of the Colorado College of Dental Surgery. It maintains its loyalty to the University and is a thorough, progressive and flourishing school. William T. Chambers, D. D. S., Denver, is the dean of the school. The school is located in Denver.

Consequent upon the adoption of the four-year course in 1895 there would regularly be no graduating class in 1898. In view of this fact and of the important arrangements necessary to accommodate the entire school in Boulder, only the first two years' work was given in 1897-'98, and only the first three years' work is given in 1898-'99. Beginning September, 1899, the full four years' course will be conducted.

The school is now exceptionally well equipped. It is a member of the Association of American Medical Colleges. The large attendance during this, the transition year of the school, surpasses the most hopeful expectations.

SCHOOL OF LAW.

The advancement and prosperity of the University has been distinctly manifested in the law school. The increase in attendance in two years is 90 per cent.

Recently the services of Judge John A. Riner, of the federal bench of Wyoming, have been secured to deliver a course of lectures on the law of criminal evidence and a second course on international law.

The standards of instruction and examination have been steadily advanced. The change in the prescribed course of study from two to three years took effect with the class entering in September, 1898. That class is the largest in the history of the law school.

The law library has been largely increased by purchase and by several generous donations of books. An additional room in the Hale building has been turned over to the law school.

The method of instruction is a conservative combination of the time-honored lecture system and the widely approved text book method with the more recent and perhaps more scientific "case method." In the Colorado school of law the "case method" is used in a sufficient number of subjects to insure the student the mental development and self-confidence which are thought to be its peculiar and most valuable features. Lectures and quizzes have their place in the School in their distinct field of usefulness.

PREPARATORY SCHOOL.

During the past two years the state preparatory school has grown in numbers and efficiency. This year the enrollment will

be three hundred and the number of instructors thirteen. For several years it has been the plan of the University to make its preparatory school second to none. Great care has been taken in selecting instructors. In science the work is in advance of any of the college requirements. The school requires ten per cent. more work in physics than is required for admission to Harvard. In Greek, the students read eight books of Homer; in Latin, ten books of Virgil. Modifications have been made in the course of study which are in keeping with the most progressive educational thought.

The preparatory building has proved itself well adapted to the requirements of the School. It is thoroughly equipped with physical, chemical and biological laboratories, and the library, started by Mr. McKenzie, is constantly growing.

As stated in the last report, the University pays one-third of all expenses, the city of Boulder the remainder.

COLORADO SCHOOL OF MUSIC.

The year 1898 opened with the school of music in far better condition than it has ever been before. The school board of Boulder offered the use of the preparatory building to the school of music, and this is now its headquarters. The new location has greatly increased the facilities of the school in every direction. Lessons are given in the building and lectures are conducted there. Recitals by instructors or pupils occur every alternate Friday. The assembly room affords an excellent opportunity for evening concerts. A concert-grand piano has been located in the building and placed at the disposal of the pupils.

The school of music has begun the plan of paying its instructors regular salaries, enabling it to procure the best instruction. The increased attendance, which numbers about eighty this fall, gives promise of an excellent future for the school.

The school of music is not a department of the University, but is allied with its interests. It is in no way supported by the University.

BUILDINGS AND GROUNDS.

Among the minor improvements on the university grounds may be noted the removal of the stable and wood yard from their prominent central position and the erection of a new stable

on a remote portion of the campus; repairing heating plant and pipe line; extension of stone walks; removal of boiler from Woodbury hall; extension of water pipes.

The building formerly known as the hospital has been improved by the addition of a wing, which has been equipped as a bacteriology laboratory. The building is now known as the medical building. In April, 1898, three new buildings were completed and dedicated: the engineering, gymnasium, and chemistry buildings. Addresses were given by Governor Alva Adams and General Irving Hale. The chemistry building is but one wing of a proposed complete structure. The engineering building was completed by the addition of a second story. The gymnasium is entirely new and complete. Work on a new hospital was begun in June, 1898, but owing to delay in receiving materials the building was not ready for occupancy at the opening of the first semester. The hospital is being erected at a cost of \$15,000; it will accommodate forty patients. Its location is on the northeast corner of the campus, on the bluff adjoining the river, and is one of the most sightly and beautiful in the region. To extend the hospital grounds, 200 front feet of land were purchased at a cost of \$800. To the fund necessary for the erection of the hospital, Boulder county contributed \$5,000 and the city of Boulder \$3,000 for specific services to be rendered by the medical faculty. In addition the University appropriates \$5,000 and citizens of Boulder contribute the remainder.

The library rooms in the main building have been altered so as to afford better accommodations. A new entrance has been made and a former lecture room turned over to the library.

NEEDS.

Amongst the needs enumerated in the report of 1896 were completion of engineering building, wing of new chemistry building, addition to medical building, gymnasium, removal of stable and wood yard. Although the money was not provided by the general assembly, the needs became so imperative that the regents voted for these purposes a portion of the permanent land fund. With a surprising economy these improvements, including walks, pipe lines and furnishings, were made at a total cost of about \$30,000. This entire sum, as well as the \$5,000 appropriated from the same source for the hospital, should be restored to the fund by special legislative appropriation.

The need of a library building and of a new main building still remains. The erection of a library building should

be postponed no longer. If the state's finances will not warrant the immediate erection of a main building, at least the auditorium of the old building should be extended. Its present crowded condition is hardly endurable.

The need of more books, more apparatus, more instructors, remains, a need that can be met only by larger appropriations. In view of the remarkable growth of the University and of the harmful economy now necessarily practiced, the usual appropriation for the University is painfully inadequate. The special fund of \$40,000, in addition to the one-fifth of a mill, voted by the last three general assemblies for each biennial period, should be doubled.

The University asks of the legislature, in addition to the one-fifth mill, the following sums for 1899-1901:

For additional support, 1899-1901.....	\$ 80,000
For addition to auditorium.....	10,000
For library building.....	50,000
To restore to the permanent land fund money taken therefrom.	37,000
	<hr/>
	\$177,000

The previous report showed gifts to the University valued in the aggregate at \$27,000. The gifts during the past two years are as follows:

County of Boulder towards hospital.....	\$ 5,000
City of Boulder towards hospital.....	3,000
Citizens of Boulder towards hospital.....	2,000
Dr. Albert L. Bennett, African curios (estimated).....	50
D. S. Wakenight, petroleum specimens.....	25
Prof. George H. Stone, Cripple Creek ores.....	50
Smithsonian Institute, rock specimens.....	40
J. Hartley, rock specimens.....	3
Prof. Milton Moss, tellurium ores.....	3
Dr. George Burleigh, anatomical chart.....	10
Various contributions, books and charts for pedagogical museum	75
Donations to library, as tabulated below, estimated value.....	1,300

General Library.

	Books.	Pamphlets.
James H. Baker.....	100 vols.	
Charles Caverno..	19 vols.	
Walter H. Nichols.....	84 vols.	43

Nellie Rust.....	93 vols.	
Guy V. Thompson.....	278 vols.	33
Mr. and Mrs. W. H. Thompson.....	99 vols.	
United States government, various departments..	600 vols.	400
Maharaja of Jeypore, portfolios of Indian archi- tecture	6 vols.	
John Gardiner.....	9 vols.	
Joseph Wolff.....	17 vols.	
Colorado superintendent of public instruction....	33 vols.	
Rev. Horace L. Wheeler, Le Keux, Memorials of Cambridge, with engraved views; other vol- umes	9 vols.	5
Various contributions.....	449 vols.	1,053

Law Library.

Calvin E. Reed.....	87 vols.	86
Henry F. May.....	158 vols.	
Charles M. Campbell.....	92 vols.	
Colorado secretary of state.....	34 vols.	
Various contributions.....	2 vols.	

Medical Library.

Various contributions.....	52 vols.	
Total	2,221 vols.	1,620

Probably in the measure of good to be accomplished and for perpetuating an honorable name, a gift to the State University is one of the best possible benefactions. Gifts may be made for any of the following purposes:

- Building for Christian associations.
- Chapel.
- Ladies' dormitory.
- New University building.
- Library building.
- Building for law school.
- Astronomical observatory.
- Funds for needy students.
- Endowment of chairs.
- Art collections.
- Library.
- Apparatus.
- Improvement of grounds.

RELATIONS TO THE STATE.

The standing of the University before the people never was so strong as to-day. The relations with the various high and fitting schools yearly bring larger numbers of students to the University, and there is a more general recognition of the worth and promise of Colorado's institution for higher education.

In pursuance of the plan outlined in the last report, the Episcopalians last year initiated work in Boulder for their students in the University by offering a course of lectures on broad religious themes and by forming a club of Episcopalian students. The lectures will be continued the present year. It is the purpose of the church to create a plant of its own near the University, with a view of using the University courses. The Presbyterians last year appointed Rev. William Robson Notman, D. D., as lecturer in ethics, and he is to continue his work this year by giving, in some building adjacent to the University, lectures on the History and Philosophy of Religion. This being a scientific and culture course, students electing it will receive credit from the college faculty. Last year the Baptists and the Christians appointed committees to report upon the question of conducting their higher educational work in the vicinity of the University.

In these days, when a large equipment is absolutely necessary to carry on honestly the work of higher education, this plan appears full of wisdom, since it enlists for a common cause the sympathetic efforts of all the important elements in the state, has a beneficial influence upon the University without in any way hampering its freedom, broadens the interests of the religious denominations, offers them the use of the superior educational advantages which the state affords, and satisfies their demand for denominational instruction and influence. Moreover, it insures the success of a great University in the Rocky mountain region—a success that will mean much to Colorado and will prove a boon to invalid students in every other state in the Union.

REPORTS SUBMITTED.

We submit herewith the pay roll of the University, treasurer's report, report of the University secretary, report of the

treasurer of the medical school, secretary's report, report of the librarian, and an inventory of property.

Respectfully submitted,

THE BOARD OF REGENTS OF THE UNIVERSITY
OF COLORADO.

JAMES H. BAKER,
President.

EDWIN J. TEMPLE,
Secretary.

PAY ROLL OF THE STATE UNIVERSITY.

(INCLUDING FIXED APPROPRIATIONS FOR THE LAW AND
MEDICAL SCHOOLS.)

James H. Baker, M. A., LL. D., President.....\$ 4,500 00

College of Liberal Arts.

J. Raymond Brackett, Ph. D., Dean, Professor of Comparative and English Literature.....	2,000 00
Mary Rippon, Professor of the German Language and Liter- ature	1,600 00
Charles Skeelee Palmer, Ph. D., Professor of Chemistry.....	2,000 00
Ira M. DeLong, M. A., Professor of Mathematics.....	2,000 00
John Gardiner, B. Sc., Professor of Biology (not full work)....	800 00
Maurice E. Dunham, M. A., Professor of Greek.....	2,000 00
James A. MacLean, Ph. D., Professor of History and Political Science	2,000 00
Arthur Allin, Ph. D., Professor of Psychology and Education..	2,000 00
Fred B. R. Hellems, Ph. D., Professor of Latin.....	1,600 00
Charles C. Ayer, Ph. D., Professor of Romance Languages.....	1,600 00
William Duane, Ph. D., Professor of Physics.....	1,600 00
Francis Ramaley, Ph. D., Assistant Professor of Biology.....	1,200 00
Francis Kennedy, Ph. D., Assistant Professor of Philosophy..	1,200 00
Charles H. Farnsworth, Instructor in Music.....	1,000 00
Louis J. Campbell, M. A., Instructor in English.....	1,200 00
Fordyce P. Cleaves, M. A., Instructor in Elocution.....	500 00
Calvin S. Brown, Ph. D., Instructor in Literature.....	200 00

May V. Henry, B. A., Assistant in German.....	200 00
Barry Hogarty, Assistant in Chemistry.....	500 00
Thomas M. Blakslee, Ph. D., Assistant in Mathematics.....	400 00
Robert S. Breed, B. S., Assistant in Biology.....	500 00
Benjamin J. Fitz, M. A., Assistant in History.....	200 00
Jessie P. Brown, B. A., Assistant in Latin.....	200 00
John C. Blake, Assistant in French.....	54 00

Alfred E. Whitaker, M. A., Librarian.....	1,500 00
Homer A. A. Smith, Assistant in Library.....	200 00
Charles F. Breed, B. S., Secretary.....	600 00
Omar E. Garwood, Assistant Secretary.....	240 00

Edwin J. Temple, Secretary Board of Regents.....	300 00
	<hr/> \$3,894 00

School of Applied Science.

Henry Fulton, M. S., Dean, Professor of Civil Engineering.....	\$ 2,000 00
George H. Rowe, B. S., Professor of Electrical Engineering....	1,900 00
John G. Kellar, B. A., Assistant in Civil Engineering.....	100 00
Lucius I. Wightman, Assistant in Drawing.....	100 00
J. Lloyd Burnham, Assistant in Electrical Engineering.....	100 00
Melvin Price, B. S., Assistant in Electrical Engineering.....	100 00
	<hr/> \$ 4,300 00

George R. Moore, Assistant in Wood and Iron Work (salary noted elsewhere).

The remaining work of the School of Applied Science is done by professors in the College of Liberal Arts.

School of Medicine.

Appropriation for expenses of Medical School, including salaries	4,500 00
Luman M. Giffin, M. D., Dean, Professor of Anatomy and Physiological Diagnosis.	
Charles Skeelee Palmer, Ph. D., Professor of Chemistry.	
John Gardiner, B. Sc., Professor of Histology.	
A. Stewart Lobingier, B. A., M. D., Professor of the Principles of Surgery and Clinical Surgery.	

Emley B. Queal, M. D., Professor of Physiology.

Horace O. Dodge, M. D., Professor of Materia Medica and Therapeutics.

Eugene H. Robertson, Ph. M., M. D., Professor of Pathology and Bacteriology.

John Chase, B. A., M. D., Professor of Ophthalmology, Otology and Rhinology.

Thomas E. Taylor, B. A., M. D., Professor of Obstetrics.

William H. Riley, M. S., M. D., Professor of Mental and Nervous Diseases.

William B. Craig, M. D., Professor of Clinical Surgery and Pelvo-Abdominal Surgery.

George H. Cattermole, M. D., Professor of Diseases of Children.

Frank E. Waxham, M. D., Professor of Medicine, Clinical Medicine and Laryngology.

John H. Parsons, D. D. S., Professor of Operative and Prosthetic Dental Technics.

Francis Ramaley, Ph. D., Assistant Professor of Histology.

Charles Fisher Andrews, M. D., Lecturer on Hygiene and Medical Jurisprudence.

LaFayette Z. Coman, M. D., Lecturer on Minor Surgery and Bandaging.

Charles S. Elder, M. D., Assistant in Gynecology and Abdominal Surgery.

Robert S. Breed, B. S., Assistant in Histology.

George O'Brien, M. D., Demonstrator of Anatomy.

Mary Alice Lake, M. D., Demonstrator of Anatomy.

School of Law.

Appropriation for expenses of Law School, including salaries.. 3,000 00

Faculty.

Moses Hallett, LL. D., Dean, Professor of American Constitutional Law and Federal Jurisprudence.

Charles M. Campbell, P. B., B. C. L., Secretary, Professor of Law.

Oscar F. A. Greene, M. A., Professor of Roman Law.

William L. Murfree, LL. B., Professor of Law.

Frank E. Gove, B. A., LL. B., Professor of Law.

Albert A. Reed, LL. B., Professor of Law.

Calvin E. Reed, LL. B., Professor of Law.

James A. MacLean, Ph. D., Professor of History and Political Science.

Lecturers.

John A. Riner, LL. B., Lecturer on International Law.

Ebenezer T. Wells, Lecturer on the Law of Real Property.

Willard Teller, B. A., Lecturer on Equity Jurisprudence, Pleading and Practice.

Hugh Butler, Lecturer on Common Law and Code Pleading, and Peculiarities of Colorado Law and Practice.

Robert Given, B. A., Lecturer on Irrigation, Water Rights and Riparian Privileges.

Platt Rogers, LL. B., Lecturer on Criminal Procedure and History of Criminal Law.

Luther M. Goddard, LL. B., Lecturer on the Laws of Patents, Copyrights and Trade Marks.

Robert S. Morrison, Lecturer on the Law of Mines and Mining.

John Campbell, M. A., LL. B., Lecturer on the Law of Private and Municipal Corporations.

Charles S. Thomas, LL. B., Lecturer on the Law of Evidence.

William C. Kingsley, Lecturer on the Law of Domestic Relations.

Henry T. Rogers, M. A., Lecturer on the Law of Wills, Executors and Administrators.

John D. Fleming, B. A., LL. B., Lecturer on the Law of Insurance.

Lucius M. Cuthbert, M. A., LL. B., Lecturer on the Conflict of Laws.

Horace G. Lunt, B. A., Assistant Lecturer on the Law of Private and Municipal Corporations.

William H. Bryant, B. S., LL. B., Assistant Lecturer on the Law of Evidence.

John H. Denison, B. A., Assistant Lecturer on Equity Jurisprudence, Pleading and Practice.

Preparatory School.

Henry White Callahan, Ph. D., Headmaster, Instructor in History and Latin (one-third paid by university, plus \$250).\$ 916 66

E. Waite Elder, M. A., Instructor in Physics and Chemistry (one-third paid by university)..... 333 33

Horace C. Hall, B. A., Instructor in Mathematics (one-third paid by university).....	233 33
Frank Y. Moseley, B. S., Instructor in Biology (one-third paid by university).....	133 33
Charles H. Farnsworth, Instructor in Music (one-third paid by university)	64 98
Chester E. Giblin, Instructor in Drawing (one-third paid by university)	96 00
Homer C. Newton, Assistant in Latin (one-third paid by university)	33 33
Eduard M. Morrissey, Assistant in Mathematics (one-third paid by university).....	33 33
Arthur Ridgeway, Instructor in Civics (one-third paid by university)	33 33
Helen Beardsley, B. A., Instructor in Latin (one-third paid by university)	266 66
Margaret H. Whiteley, B. A., Instructor in Greek (one-third paid by university).....	100 00
Charlotte E. Shedd, Instructor in English (one-third paid by university)	166 66
Mary Stewart, Assistant in History (one-third paid by university)	33 33
R. T. Marshall, Janitor (one-third of four-fifths paid by university)	144 00
	<hr/> \$ 2,588 27

Other Employees.

James E. Bemus, Steward.....	600 00
George R. Moore, Engineer and Carpenter.....	780 00
W. W. McCarter, Fireman and Workman.....	510 00
Celso Espinosa, grounds.....	480 00
George A. Carlson, grounds.....	108 00
Nine student janitors.....	895 50
Albert Dakan, Law Librarian.....	40 00
Clifford B. Stubblefield, Law Librarian.....	40 00
Mrs. Helen Osgood, care of rooms in Woodbury hall.....	180 00
	<hr/> \$ 3,663 50

Summary.

College of Liberal Arts (including officers of the university).....	\$33,894 00
School of Applied Science.....	4,300 00

Medical School.....	4,500 00
Law School	3,000 00
Preparatory School.....	2,588 27
Other employees.....	3,663 50
Total	<u>\$51,945 77</u>

TREASURER'S REPORT.

FROM OCTOBER 1, 1896, TO OCTOBER 1, 1898.

Receipts—

Cash on hand October 1, 1896.....	\$ 4,782 24	
State treasurer—General fund, one-fifth mill tax	93,837 25	
State treasurer—Land income.....	6,901 80	
State treasurer—Special appropriation, 1895-1896.	492 51	
State treasurer—Special appropriation, 1897-1898.	16,516 73	
L. M. Giffin, treasurer.....	4,095 38	
Bernice Lochhead, secretary.....	2,000 00	
Guy V. Thompson, secretary.....	4,100 00	
C. F. Breed, secretary.....	2,500 00	
H. W. Callahan.....	60 00	
Warrants held in bank.....	18,723 79	
		<u>\$154,009 70</u>

Disbursements—

Warrants as per reports to regents..	\$129,556 43	
Warrants held in bank.....	18,723 79	\$148,280 22
October 1, 1898, cash on hand.....	5,729 48	
		<u>\$154,009 70</u>

Respectfully submitted,

J. H. NICHOLSON,
Treasurer.

REPORT ON BUILDING FUND.

TO OCTOBER 7, 1898.

Receipts—

Received from state treasurer, Permanent	
Land fund.....	\$ 36,658 81
Received from city of Boulder, account hospital	2,000 00
Received from Boulder county, account hospital	1,000 00
	<u>\$ 39,658 81</u>

Disbursements—

Warrants paid as per reports rendered.....	\$ 36,658 81	
Balance on hand.....	3,000 00	
		\$ 39,658 81

Respectfully submitted,

J. H. NICHOLSON,
Treasurer.

REPORT OF UNIVERSITY SECRETARY.

FROM SEPTEMBER 1, 1896, TO SEPTEMBER 1, 1898.

Receipts—

Balance on hand, September 1, 1896.....	\$ 355 97	
Tuitions, fees and sundry small receipts, 1896-7.....	3,061 84	
Tuitions, fees and sundry small receipts, 1897-8.....	4,199 67	
Additional gymnasium receipts, and fees afterwards re- turned	92 01	
		\$7,709 49

Disbursements—

By cash to treasurer, 1896-7.....	\$3,000 00	
By cash to treasurer, 1897-8.....	4,100 00	
By returned fees and paid to gymnasium instructor.....	92 01	
Cash on hand, September 1, 1898.....	517 48	
		\$7,709 49

Turned over to treasurer, \$7,100. Deducting \$1,000 deposited in September, 1896, and adding \$2,500 deposited in September, 1898, we have \$8,600, the sum credited in the treasurer's report for the corresponding period.

REPORT OF TREASURER OF SCHOOL OF MEDICINE.

FROM OCTOBER 1, 1896, TO OCTOBER 1, 1898.

Receipts—

Balance on hand, October 1, 1896.....	\$ 544 46	
Fees collected from October, 1896, to October, 1898.....	4,033 81	
From dental apparatus sold (still due \$350).....	150 00	
		\$4,728 27

Disbursements—

Paid treasurer of the board of regents.....	\$4,095 38
Due from the university for bills paid.....	150 17
Balance on hand, October 1, 1898.....	482 72
	<hr/>
	\$4,728 27

L. M. GIFFIN,
Treasurer.

SECRETARY'S REPORT.

Boulder, Colo., October 1, 1898.

To the Board of Regents of the University of Colorado:

Gentlemen—I submit herewith a statement of the warrants issued during the period beginning October 1, 1896, and ending September 30, 1898, and the purposes for which the same were issued:

College and School of Applied Science, instruction.....	\$ 73,891 74
School of Medicine, instruction, library, apparatus, etc.....	11,028 28
School of Law, instruction, library, etc.....	7,550 77
Preparatory School, instruction and other expenses.....	6,246 18
Library, books, periodicals and supplies.....	3,313 19
Biology, books, apparatus and supplies.....	795 20
Chemistry, books, apparatus and supplies.....	2,450 81
English, books.....	16 33
Ethics, books.....	96 45
French and German, books, etc.....	362 47
Greek, books, etc.....	188 11
History and Political Science, books.....	393 84
Latin, books.....	379 45
Literature, books, etc.....	651 81
Mathematics, books.....	493 52
Music, books.....	54 08
Philosophy, Pedagogy and Psychology, books, etc.....	812 66
Physics, books, apparatus and supplies.....	1,737 72
Civil Engineering, books and apparatus.....	538 13
Electrical Engineering, books, apparatus and supplies.....	2,180 35
Regents, service and mileage.....	3,026 50
Buildings and grounds, salaries of janitors, insurance, etc....	17,710 68

SUPERINTENDENT OF PUBLIC INSTRUCTION. 329

Furniture and supplies.....	1,635 18
Printing, stationery and postage.....	3,713 41
Fuel and light.....	5,246 98
Advertising (including visitation of schools and institutes, and lectures).....	3,366 16
Unclassified	5,392 18
Total	\$153,272 18

Warrants issued by secretary during period.....	\$153,272 18
Of these, not yet paid by treasurer.....	4,991 96

Amount paid during period, as shown in treasurer's report	\$148,280 22
--	--------------

Amount drawn for buildings from Permanent Land fund, as shown in treasurer's report.....	\$ 36,658 81
---	--------------

Respectfully submitted,

E. J. TEMPLE,

Secretary.

LIBRARIAN'S REPORT.

James H. Baker, President of the Board of Regents, University of Colorado:

Dear Sir—I have the honor to present herewith my report on the library covering the period from October 1, 1896, to October 1, 1898:

Additions.

The total number of volumes accessioned and placed in the library during the two years is 5,600, derived from the following sources:

Gifts (public documents).....	600
Gifts (miscellaneous).....	1,621
	— 2,221
Binding	452
Purchased	2,927
Total	5,600

Donations.

Gifts have been received, entered and acknowledged as follows:

Books	1,697
Miscellaneous pamphlets.....	1,620

Binding.

Periodicals (completed volumes).....	436
Newspapers	16
Books (rebound).....	90
Books (paper).....	462
Total volumes bound.....	1,004

Summary.

Number of volumes reported October 1, 1896.....	13,156	13,156
Additions—		
By gifts (public documents).....	600	
By gifts (miscellaneous).....	1,621	
	<hr/>	2,221
By binding.....		452
By purchase.....	2,927	
	<hr/>	5,600
Total		18,756
Deductions—		
Cancelled (lost).....		112
Cancelled (duplicate government documents returned to superintendent of documents).....	149	
	<hr/>	261
Total number of volumes in library, October 1, 1898.....		18,495

Donations, General Library.

	Books.	Pamphlets.
James H. Baker.....	100 vols.	
Charles Caverno.....	19 vols.	
Walter H. Nichols.....	84 vols.	43
Nellie Rust.....	93 vols.	
Guy V. Thompson.....	278 vols.	33
United States government, various departments..	600 vols.	400
Mr. and Mrs. W. H. Thompson.....	99 vols.	
Maharajah of Jeypore, portfolios of Indian architecture	6 vols.	
John Gardiner.....	9 vols.	
Joseph Wolff.....	17 vols.	
Colorado superintendent of public instruction....	33 vols.	

Rev. Horace L. Wheeler, Le Kuex, Memorials of Cambridge, with engraved views; other vol- umes	9 vols.	5
Various contributions.....	449 vols.	1,053

Law Library.

Calvin E. Reed.....	87 vols.	86
Henry F. May.....	158 vols.	
Charles M. Campbell.....	92 vols.	
Colorado secretary of state.....	34 vols.	
Various contributions.....	2 vols.	

Medical Library.

Various contributions.....	52 vols.	
Total	2,221 vols.	1,620

Respectfully yours,

ALFRED E. WHITAKER,
Librarian.

INVENTORY OF UNIVERSITY PROPERTY.

The following estimates, taken from inventories recently made, are presented as fair approximations:

Grounds.

Campus, fifty-two acres (estimated present value unim- proved)	\$ 26,000 00
Hospital grounds (cost).....	800 00
Improvements, as fences, grading, roads, walks, pipes, drains, trees, lake, bridges.....	10,300 00
	<hr/>
	\$37,100 00

Buildings. (Approximate cost of each.)

Main building.....	\$ 36,500 00
University cottage.....	6,600 00
Medical building.....	8,300 00
Cottage No. 1.....	8,400 00
Cottage No. 2.....	3,800 00
Anatomy building.....	2,500 00
Woodbury hall.....	24,500 00
Hale Scientific building.....	47,500 00
Engineering building and heating plant.....	17,100 00

Heating plant, boilers, pipes in ground, fan house.....	6,000 00
Observatory	200 00
Ice house.....	200 00
Stables and sheds.....	1,200 00
Chemistry building.....	9,700 00
Gymnasium building.....	5,700 00
Hospital, furnished.....	15,000 00
	<hr/>
	\$193,200 00

Furniture, Etc.

Teams, implements, tools, engineer's and carpenter's supplies (value)	\$ 1,800 00
Gymnasium apparatus (cost).....	500 00
Room furniture, as chairs, settees, desks, tables, movable cases, pictures, office furniture, dormitory and dining hall equipment, shades and janitor's supplies (value).....	9,000 00
	<hr/>
	\$ 11,300 00

Library.

Library (value).....	\$ 33,000 00
----------------------	--------------

Apparatus.

Biology	\$ 2,093 00
Chemistry ...	2,025 00
Civil engineering.....	2,074 00
Comparative and English literature.....	848 00
Electrical engineering.....	4,797 00
Greek	336 00
Latin	20 00
Mathematics	116 00
Medicine	4,686 00
Physics	6,356 00
Psychology	286 00
	<hr/>
	\$ 23,637 00

Collections.

Geological and mineral (value).....	\$ 2,392 00
Art (cost).....	1,800 00
	<hr/>
	\$ 4,192 00

Summary.

Grounds	\$ 37,100 00
Buildings	193,200 00
Furniture, etc.....	11,300 00
Library	33,000 00
Apparatus	23,637 00
Collections	4,192 00
	<hr/>
	\$302,429 00

COLORADO SCHOOL FOR THE DEAF AND THE BLIND.

SUPERINTENDENT'S REPORT.

To the President and Board of Trustees of the Colorado School for the Deaf and the Blind:

Ladies and Gentlemen—The two past years in the history of this school, whose detailed operations I am now to record, have been years of quiet, effective work. Our methods have been those so successfully followed heretofore with such additions and changes as seemed necessary to put us in line with the most advanced schools in the country.

In my last report, written shortly after an extended visit among eastern schools, I called attention to the fact that our school was somewhat behind the best in the matters of lip reading and speech for the deaf and music for the blind, and suggested that it would be well to push the work along these lines at the earliest possible moment.

Pursuant to this suggestion the board found the means at its next annual meeting to reorganize the oral department, under the most favorable auspices possible, and to add another teacher in the musical department. Of these changes, I shall have occasion to speak more fully in another part of the report.

Attendance.

The attendance at the date of the last report was.....123

Since which time there has been admitted..... 54

 Making a total attendance of.....177

These are accounted for as follows:

Post-graduates 3

Removed from the state..... 8

Graduated 3

Honorably discharged.....	15
Dismissed as ineligible.....	2
Expelled	3
Suspended	1
Deaths	2
Voluntarily remaining at home.....	27
Present attendance.....	113
— 177	
Blind boys, 18; blind girls, 21; deaf boys, 37; deaf girls, 37.	

While the total attendance has been somewhat larger than for the two years previous, the present number in school is smaller by ten, than in 1896. Upon an examination of the records I find that while an unusually large number of deaf pupils have closed their school life, their places have been filled with new pupils. This is not the case in the blind department, where the loss has been 20 per cent. in the period under discussion. Whether this is local and temporary, I can not say, but Mr. Wait, of the New York city school for the blind, whose numbers are also decreasing, attributes it to the more successful combating of blindness by the medical profession. We desire all the blind children in the state to come to school, but it would be pleasant to find their number growing smaller and smaller.

I think it would be proper in this connection for me to say a few words to those parents of deaf or blind children who are standing in the way of their education. The state has done its duty nobly and has made ample provision for the education of every deaf and blind child within its borders. And yet there are some parents who, it seems, fail to appreciate what has been done and persist in having their children grow up in ignorance. There are cases, of course, where legitimate excuses are rendered, but there are many others in which no excuse could be made. The parents are loth to part with their children, or the children themselves, having tried a session or two at school, decide they prefer a life of idleness and indulgence at home to one of discipline and duty at school. These parents fail to realize that they are committing a crime both against the child and the state; against the child, because it is shut off from all intellectual and moral development, and against the state, because such a child is more liable than ordinary people to become, on one hand a helpless drone or, on the other, an irresponsible criminal.

To stamp this more indelibly on the minds of those who are derelict I will insert a clipping from the pen of Superintendent

Mathison of the Belleville school, Ontario, Canada, who has evidently run across the same kind of people as we have in Colorado. Mr. Mathison's article contrasts the condition of an uneducated hearing person with that of an uneducated deaf mute. A similar comparison might be instituted between an uneducated seeing person and an uneducated blind one.

"An uneducated hearing man, if of average natural intelligence, readily acquires a very considerable vocabulary, he easily, and without any effort on his part or others, learns the names and characteristics of every kind of object that comes within his observation, is able to express his thoughts freely and intelligibly, and by means of converse with others, he has a pretty thorough knowledge of all matters that pertain to his own immediate interests; and though he may not be able to read a word, he can, through others, ascertain in a general way what is transpiring throughout the world, and can hold constant and intelligent converse with his friends and others with whom he may come into contact. He can take part in the various activities of life, can discharge in a creditable manner all the duties and responsibilities devolving upon him, and may even rise to positions of trust and honor, and, despite his limitations, may thoroughly enjoy life in nearly all its phases. His moral nature also may be fully developed, his religious convictions may be deep, sincere and accurate, and he is quite capable of understanding and performing his duty to God and man. How vastly different from this is the condition and the lot of an uneducated deaf man. With but few exceptions he lives in a state of blank, impenetrable ignorance and awful isolation. His want of knowledge is not merely comparative, but practically absolute. He does not know the names of the commonest objects of every day use, and his knowledge of what goes on round about him is limited to what he actually sees with his own eyes, since he cannot receive ideas or information from others, nor convey ideas or wishes to them, except his commonest wants, which he may express in pantomime. Unable to hold converse with others, because of his entire lack of language, he lives a life of loneliness quite inconceivable to hearing people. Of the general events transpiring throughout the world he must remain in absolute ignorance, since he cannot read and possesses no language by which he can communicate with his friends. The whole of Europe might be deluged with blood, or half the inhabitants of the earth destroyed by pestilence, earthquake, or famine, and he would know nothing of it, for there is no way in which any ideas foreign to his own experience can be conveyed to him.

And while he may not be immoral in practice, he is, to a large extent, quite immoral, since he can have but a very limited apprehension of the concepts of right and wrong, and he can know nothing of the existence of a God or of a hereafter, nor even that he has a soul, nothing of religious thought or sentiment, except such faint, intuitive ideas on such matters as may be inherent to mankind. To him life is an insolvable enigma, and death a dread and fathomless mystery. And so he lives his blank, joyless existence, never hearing the sweet sounds of human speech, never knowing the delight of the communion of friend with friend, never feeling within him the pulsations of awakening and developing intelligence, never realizing the comfort of human sympathy nor the consolations afforded by religion; and at the end he passes through the gates of death with no conception of what it means, and no hope or knowledge of aught beyond. An existence such as this is terrible to contemplate, sad and pathetic beyond description or even conception; yet to such an existence is condemned every deaf mute for the education of whom adequate facilities are not provided. It is to be hoped that no longer, either in this land or any other, the opportunity will be denied every deaf mute of acquiring that golden strand of language, which, though so easily and inexpensively secured, will serve as the clue that will guide its possessor out of this labyrinth of mental ignorance, moral blankness and religious stagnation, and open up to him all the bounteous store of the wisdom of this world and the assurance of the joys of the world to come."

Graduates.

Those who have been graduated since last report are Miss Ethel Ritchie and Mr. William Horton of the deaf department and Miss Hattie Davis of the blind.

Miss Davis has since married, Mr. Horton has secured work and is supporting himself, while Miss Ritchie has entered Gallaudet (National) College for the Deaf at Washington, D. C. It is gratifying to note that her examination papers were among the very best presented.

Health.

In the spring of 1897 the school suffered an epidemic of German measles. The disease was of a mild form but persistent. It went steadily through the school, in spite of all precautionary measures, until all the material was exhausted. Very few of the pupils were sick enough to go to bed, but the interference

with the school work was nevertheless considerable. One boy had pneumonia as a consequence; it was a simple case, however, that yielded readily to treatment.

The two deaths before mentioned were those of Satapuits, a little Indian girl, and Charles Morgan, a blind young man of more than usual promise, who was within one short year of graduation.

Satapuits came to us from the Ute Indian reservation and for a year or two was as robust a child as one could wish to see. In the last year, however, she was attacked by pneumonia, followed by consumption to which she succumbed some months later. Such, I learn, is a rather common occurrence among Indian children who are confined in school.

Though we were not permitted to train this semi-savage child up into cultured womanhood, we nevertheless noted great changes in her character under the softening influences that were thrown around her, and have no doubt that her last moments were made more comfortable by what she knew of the Christian's "Great Father."

The death of Charles Morgan was one of the saddest in the annals of the school. "Charlie," as he was familiarly called, had been with us from early childhood and had so conducted himself as to win the respect and esteem of both officers and pupils.

His death seemed the result of an accident. Rejoicing in the strength of his young manhood, he was showing his companions what he could do in the way of lifting. Suddenly he was seized with violent hemorrhage of the lungs, brought about evidently by rupture of a blood vessel.

He seemed to improve for a time, but pneumonia supervened and in his depleted condition he could not rally.

Changes.

Two of the lady teachers in the deaf department retired at the close of the session in 1897, viz., Miss Tillie Garman and Miss Flora St. Clair. These vacancies were filled by the appointment of Miss Rebecca Sparrow of the Providence, Rhode Island, Oral School, and of Mr. Max Kestner, one of our graduates who had also taken the college course. Miss Alma Chapin, who has taken training in the Northampton (Oral) School, was added as a new teacher. Miss Jessie Dudley, substitute in the place of Mrs. Argo who had been compelled to go to a lower altitude with her sick child, was appointed a regular teacher, it having been found that Mrs. Argo would have to remain longer than she had at first anticipated.

Miss Ella Cornish, a semi-deaf young lady who had been with us several years as assistant supervisor of boys and latterly as special also of Lottie Sullivan, retired to make place for a

hearing lady who would be more acceptable to the blind boys. Miss Olga Bright, who had served an apprenticeship in the Illinois School for the Deaf, was chosen her successor as assistant supervisor, and Mrs. G. W. Veditz as teacher of Lottie Sullivan.

Mrs. McWhorter retired from her position of girls' matron because of advancing age. She was succeeded by Miss Eliza M. Reed, who had taught the deaf several years in Missouri and who was therefore thoroughly familiar with their language. She was also acquainted with institution life and fitted into her new place as if "to the manner born."

At the close of the school year 1897-8 Miss Grace Young, the girls' supervisor, gave up her place to assume the marriage relation, and was succeeded by Miss Sadie Young, her sister, and a graduate of this school and Callaudet College.

Mr. W. A. McMcWhorter, superintendent's clerk and boys' supervisor, has but just tendered his resignation to go into other business. His successor is Mr. George M. Paddock, who has entered upon his duties with energy and enthusiasm, and though unfamiliar at the beginning with the sign language, is rapidly making himself master of the situation.

Miss Maggie E. Kneringer was appointed as an additional music teacher and has proven herself a valuable assistant.

Several changes were also made in the Industrial Department, some because of advancing age, some on the score of economy and others in the interests of better service.

Two Conventions.

There have been two notable gatherings of teachers this year, the "Convention of American Instructors of the Deaf," and the "Association of the American Instructors of the Blind." The former met at the Ohio School for the Deaf at Columbus and the latter with the Michigan School for the Blind at Lansing. It is a matter of regret to the Superintendent that he was not able to attend either of these conventions. Their proceedings, it is true, will be printed and we may thus share to some extent the good things of the meetings. It is not, however, as if we had been present and met other members in free and confidential intercourse outside the halls of the conventions. Our school was well represented at both conventions by Mr. Argo at Columbus and by Mrs. Bohrer at Lansing.

The Growth of Oral Teaching.

Statistics show that oral teaching is steadily advancing. In 1896 2,752 pupils out of a total of 11,054, or 25 per cent., were

taught wholly or mostly by speech and lip reading. In 1898 the total is 11,424 and the number taught wholly or mostly by speech is 3,466, or 30 per cent.

This does not necessarily indicate that oral methods will ultimately supplant manual methods, but that superintendents generally are experimenting in a thorough way to determine just what proportion of the deaf may be profitably taught in that way. These experiments take time and it will probably be several years yet before a just judgment can be formed.

There are many questions to be settled some of which are as follows: (1) Whether all intelligent deaf children should be taught orally or only those who, through partial hearing at the present or perfect hearing in the past, are specially fitted to it. (2) Whether it is possible to give the congenitally deaf speech in the limited time they may devote to education without a corresponding loss to them in mental development. (3) Whether the congenitally deaf are better fitted for the duties of citizenship with such speech as they can get, even though less thoroughly developed intellectually. (4) Whether orally taught pupils use the speech, upon acquiring which so much time is used, with any but familiar friends, and, if not, whether it pays to go to the extra expense. (5) Whether it is possible to succeed in oral teaching in a school where the pupils use signs freely outside the school room.

If this last question should be answered negatively, I, for one, could never get my consent to the abolition of the sign language. It would be too high a price to pay, considering the varied possibilities of this language as an educational factor and social medium.

The deaf, however educated, must find social pleasure and sympathetic association with the deaf or not at all. They may hang on the outskirts of hearing society and get a crumb here and there through lip reading and speech. Unalloyed pleasure, however, will never be theirs till in the companionship of those similarly afflicted, they deliver themselves up to full, free, untrammelled interchange of ideas in their mother tongue, yielding themselves meanwhile willing captives to the sweet influence of that condition wherein

"Thought leaps out to wed with Thought
Ere Thought can wed itself with speech."

Reorganization of the Oral Department.

Having decided upon a reorganization of our oral department, even during my visit to the East, provided I could have

the consent of the board, a considerable part of the time was devoted to a search for a suitable person to be at the head of it. The lady I finally selected (conditionally of course) was Miss Sparrow, whose experience extended over several years in some of the best schools in the country. With Miss Sparrow as the head it was quite easy to arrange the minor details. Miss Powell, who had taught with us several years successfully, was retained and Miss Chapin selected as a teacher of beginners. A year later Miss Dudley, who had added a year of special training under Miss Sparrow to her unusually full previous preparation, took charge of an oral class.

We thus have at present four well graded classes under four exceptionally well prepared teachers all thoroughly in love with their work and believing in it heartily. At the same time, while the manual teachers are not actually promoting the oral work, not one is out of sympathy with it nor disposed to hinder it in any way. Our pupils are as bright as any in the world and we confidently expect, under these circumstances, to get the best results. When these results have been attained it will be possible, we believe, to shape a policy for the school for all time.

We are in a much better position to judge of the relative values of the oral and manual methods than any school where one method is used to the exclusion of the other. Here, with the exception that the oral classes have one grade and the manual classes from two to three, each department has an equal chance. The teachers are as capable and energetic and the pupils as bright. The attainments of the graduates under the manual method serve as a standard for the newer method to measure itself by in the struggle for ascendancy.

Special Pupils.

In my last report there was mention made of Lottie Sullivan, a little deaf-blind girl who had been recently admitted. Lottie is still with us and is doing quite creditable work. By means of the point type she is now able to construct sentences of considerable length in simple English. This, to a casual observer, would seem to be the extent of her knowledge, but such is not the case. Through the medium of signs in conversation with her deaf companions, any and all of whom are her ready and willing teachers, much of life has been opened up to her, so that it is not difficult to bring to her comprehension ordinary concrete affairs. The feelings, hopes, aspirations of the untaught human heart are also easily within her grasp. Much time must yet elapse, however, before we can hope to find fruitful soil in her mind and heart for the propagation of things spiritual.

Her teacher, Mrs. G. W. Veditz, is enthusiastic in her labors and considering the difficulties in the way, is accomplishing even more than one would expect. We give below a short exercise in Lottie's own language.

"The deaf girls have a cat. The cat is an animal. It has soft fur. I like to pet the cat. It is yellow and white. It has four legs. The cat's legs have sharp claws. The cat is mad it will scratch. The cat has long whiskers. It catches the mice. It likes to eat mice. I do not like to eat mice. The cat has big eyes. It see in the dark the sun gone. LOTTIE."

Another member has now been added to the class, Ralph Wooden, an entirely blind and almost entirely deaf boy of eight years. Ralph exhibits so great a curiosity to know all that surrounds him and so retentive a memory that the indications are he will make rapid progress. In the three months he has been with us he has learned about twenty nouns, and more important than all, has learned what he is here for.

These two pupils are not getting all they should have. For the very best results, they should each have an individual teacher at least five hours a day.

In other states it is customary to make special appropriations for the education of such pupils and I should like to see the same done here.

The Blind Department.

As already stated, this department is somewhat smaller in numbers than at the date of last report. There still remains, however, an average of about ten pupils to the teacher, which is sufficient considering the necessity for individual instruction and the further fact that in the four classes there are approximately twelve grades—one for each year.

This is one of the misfortunes of a small school. It is rare to have beginners enough any one year to form a full class, hence we come more under the category of an ungraded country school than of a city graded school.

In the last report I mentioned the fact that it was the purpose to steadily raise the standard. This we have been able to do and our blind pupils will, hereafter, upon graduation, find themselves more nearly prepared for the ordinary college, if they desire to pursue their education. If not, they will have had the mental gymnastics involved in studying a difficult language (Latin), to say nothing of the better understanding of English which is largely derived from it.

I have asked the musical director to make a statement of his department, which will appear below. The work is quite thorough, as will appear, and if some of our blind pupils do not earn a living by music it will be their own fault.

The Musical Department.

To D. C. Dudley, Superintendent:

During the past two years this department has shown a commendable degree of progress both in the enlarged scope of the work undertaken and in the quality of the results attained.

The higher standard of excellence noticeable in the rendition of instrumental as well as vocal music gives promise of a growing musical perception and a broader ideal of musical culture, evidencing at the same time greater care and zeal on the part of the teachers and more thoughtful and diligent practice among the pupils.

There has been added to the course systematic instruction in harmony, musical composition and analysis, and individual lessons in voice culture. The course as it stands at present includes instruction on the piano, violin, violoncello, flute and other wind and stringed instruments when desired; study of harmony, musical form, tangible notation and piano tuning. In addition to private lessons in voice culture there is a junior and senior singing class, and an orchestra, each of which meets three times per week for instruction and rehearsal. Care is taken in connection with the work in harmony to give the pupils a thorough knowledge of sighted notation, thereby better fitting them to teach sighted pupils. To make this more practical (that is, the teaching of sighted children), the director, when possible, secures pupils with sight, who take their lessons from a student under his personal supervision. As soon as practicable a class in musical history and literature will be inaugurated. The increasing amount of literature along this line in the New York point print (for which we are largely indebted to the efforts of Superintendent W. B. Waite of the New New York City School) will make this branch of education more feasible.

The department has been supplied since December, 1896, with two second-hand grand pianos and three uprights thus relieving the school from the necessity of renting instruments.

The needs of the department are a pipe organ, tools and piano supplies for tuning class, and above all, for immediate use, three punctographs and one stereotype machine. The possession of these machines would practically put in our hands any music we might need and in any number of copies.

The total number of pupils who have received instruction in music since the last report is 43, piano pupils 36, violin 12, violin-cello 3, flute 1, voice 6, harmony 7, piano tuning 7.

Respectfully submitted,

A. L. BOHRER,
Director of Music.

Course of Study.

DEPARTMENT FOR THE DEAF.

As has been stated, this department is sub-divided into two distinct departments, the oral and the manual, each having four teachers. In the oral department all instruction is given by means of speech, speech-reading and writing, daily drill in articulation being continued throughout the course. In the manual department the instruction is given by means of the manual alphabet, writing and, in the younger classes, a free use of the sign language. The course of study, which is practically the same in both departments, is as follows:

PRIMARY GRADE.

Language, reading, writing, numbers, nature study, drawing.

Text books: Miss Fuller's Primer, Miss Sweet's No. 1 and No. 2, Prince's Arithmetic.

Note: Much of the instruction in this grade is by means of manuscript lessons.

INTERMEDIATE GRADE.

Language, reading, writing, geography, arithmetic, nature study, drawing.

Text books: Miss Sweet's Nos. 3 and 4, Jenkin's Talks and Stories, Crane's Bits of History, Eggleston's First Book in United States History, Monteith's Primary Geography, Prince's Arithmetic, Dudley's Arithmetic.

GRAMMAR GRADE.

Language, reading, arithmetic, geography (political and physical), history of the United States, history of England.

General history, civil government, physiology, natural philosophy, botany (lectures), zoölogy (lectures), drawing.

Text books: Longman's School Grammar, Felter's Arithmetic, Walsh's Arithmetic, Barnes' Complete Geography, Houston's Physical Geography, Eggleston's United States, Iligginson and Channing's English History, Parley's Universal History, Steele's Physics.

DEPARTMENT FOR THE BLIND.

The course of instruction as given below has been followed for two years, and it is safe to say that the average pupil will be able to complete the work in the allotted time without interfering in the least with the pupil's work in the other departments.

COURSE OF INSTRUCTION.

Primary Grade. Three Years.

(C)

Mathematics—Numbers to 50; simple mental work.

Reading—Primer and first reader; spelling.

English—Language lessons.

Writing—In New York point.

(B)

Mathematics—Numbers to 150; reading from 100-1,000; simple mental work in addition, subtraction, multiplication and division.

Reading—Second and Third readers; spelling.

English—Language lessons with special emphasis upon the noun and adjective.

Science—Talks by the teacher.

Writing—In New York point.

(A)

Mathematics—Numbers to 1,000; reading from 1,000-10,000; simple mental work in addition, subtraction, multiplication and division.

Reading—Fourth and Fifth readers; spelling.

English—Language lessons with special emphasis upon the pronoun, verb, subject, copula and predicate.

Science—Talks by the teacher.

Writing—In New York point.

Intermediate Grade. Three Years.

(C)

Mathematics—Review and compound numbers.

Reading—From various authors; spelling.

Geography—Of the United States.

English—Grammar.

Science—Elementary work.

(B)

Mathematics—Common fractions to decimals.

History—Of the United States.

Geography—Of the world.
 English—Grammar.
 Science—Elementary work.

(A)

Mathematics—Decimals.
 History—Of the United States complete.
 Geography—Descriptive.
 English—Review of grammar.
 Science—Elementary work.
 Grammar Grade. Three Years.

(C)

Mathematics—Arithmetic.
 History—General, Grecian, complete.
 Geography—Physical, complete.
 English—Grammar.

(B)

Mathematics—Arithmetic with a review of arithmetical principles.

History—General, Roman, complete.
 Science—Physiology and hygiene; zoölogy.
 English—Analysis and composition.

(A)

Mathematics—Elementary algebra.
 History—Mediaeval and English.
 English—Composition and introduction to literature.
 Typewriting—Letter writing; writing from dictation with special emphasis upon rapidity; manifolding; care of machines.
 Senior Grade. Three years.

(C)

Mathematics—Algebra, Robinson supplemented by Peck's Manual.

History—Civil government, Fisk; Hatch's Civil Government of Colorado; Johnston's History of American Politics and Lectures on Political Economy.

English—Elements of Composition and Rhetoric, Waddy.
 Latin—Collar and Daniell's Beginner's Book.

(B)

Mathematics—Plane Geometry, Wells', with exercises.
 Science—Introduction to Physical Science, Gage, with lectures.
 English—Painter's Introduction to American Literature.
 Latin—Collar and Daniell's Beginner's Books, complete, and Caesar.

(A)

Mathematics—General review.

Science—Geology, chemistry and botany, with lectures.

English—American and English literature.

Latin—Cæsar, with Allen and Greenough's Grammar.

Philosophy—Gordy's Mental and Fairchild's Moral, with lectures.

Monthly rhetorical and evening readings are conducted throughout the entire time the pupils are in school.

Daily chapel exercises and special Sunday exercises are carried on throughout the entire course.

Industrial Department.

Educators all over the country are waking up to a fact long ago learned by schools for the deaf and the blind, viz.: that education is incomplete unless a boy's or girl's hand and eye are trained simultaneously with the brain. Hence we have manual training schools springing up in connection with almost every important system.

Our trades continue the same as before with the addition of shoe-making. They stand now, printing, carpentering, baking, shoe-making, and mattress-making for the deaf boys; mattress-making, broom-making, and piano tuning for the blind boys; sewing, knitting, crocheting, dressmaking, and cooking for the deaf girls and the same for the blind girls except cooking.

Though this department is not as popular with either parents or children as the literary department, it is, nevertheless, of even more importance to all those pupils who must earn their living by physical labor, and that includes the far larger part of the whole number.

Conclusion.

I desire in conclusion to bear testimony to the faithfulness and efficiency of my assistants in every department of the school. Without their earnest and intelligent coöperation, it would have been impossible to have brought the school up to its present high standard of excellence. The policy of few changes, and then only when the service could be improved, is bearing its legitimate fruit.

Hoping that a benign Providence may continue to smile upon you and to give you wisdom for the management of your great charge, I am,

With great respect,

Your obedient servant,

D. C. DUDLEY,

Superintendent.

REPORT OF THE COLORADO STATE INDUSTRIAL SCHOOL.

To the Honorable Grace Espy Patton, State Superintendent of Public Instruction:

The board of control respectfully submit to you this ninth biennial report of the Colorado State Industrial School, for boys, for the two years ending November 30, 1898, and submit herewith the reports of the superintendent and physician:

MOVEMENT OF POPULATION.

Number of inmates in school November 30, 1896.....	117
Number received during the term.....	134
Total	251

LEAVING INSTITUTION DURING TERM.

Expiration of sentence.....	40
Pardoned	6
Escaped	5
Apprenticed and paroled.....	82
Total number remaining December 1, 1898.....	118

The eleventh general assembly appropriated for the support and maintenance of this institution, the sum of \$50,000, together with the cash receipts for two years.

They also appropriated from the internal improvement income fund, the sum of \$3,000, for the purpose of increasing the water supply, but it being held illegal to make such appropriation from this fund, the bill was not approved, and on this account no money has been received.

Notwithstanding the fact that the above mentioned \$3,000 was not available, we were compelled to increase our water supply, which was done by laying four-inch iron service pipe, connect-

ing our wells with the Golden city water system; also the putting in of a new pump and new hose as fire protection, and this at a total cost of \$2,500, which has been paid from the maintenance fund.

Many needed improvements and repairs have been delayed on account of lack of funds, and while all departments have been managed with the most rigid economy, yet we find ourselves at the close of the present biennial term \$4,795.08 in arrears, and vouchers to this amount have been authorized by Governor Adams in accordance with the law.

The last appropriation was not sufficient for carrying out the best reform methods.

Below will be found a tabulated statement of the receipts and expenditures for the biennial term:

EXPENDITURES.

Maintenance, November 30, 1896, to December 1, 1898..	\$59,457 02
---	-------------

RECEIPTS.

Appropriation	\$50,000 00	
Cash earnings.....	4,661 94	54,661 94
		<hr/>
Vouchers issued in excess of receipts.....		\$ 4,795 08

We ask for \$60,000 and our cash receipts for the general maintenance of the institution for the next two years. The appropriation requested is absolutely necessary if the usefulness of the school is to be maintained.

Although many improvements have been made during the past two years, there are other very necessary improvements needed, to which we respectfully invite your attention, to wit:

For the completion of our steam-heating plant, \$2,500. This is imperative. We are now using nineteen stoves, which we wish to displace. Many of them are in rooms directly under the dormitories where a large number of boys sleep. This is a source of constant danger, as well as an added expense.

For an electric plant, \$2,500. This will save a large item now paid for a very indifferent light.

For laundry machinery, \$1,100. Our laundry is in no sense a modern one; we simply use the old-fashioned wash-board and tubs, and our laundry is therefore a place where our boys are taught nothing that will be of use to them in after life, and is in fact more like a place of punishment than a trade school. All other like institutions have the latest improved machinery, and we should have it.

For insurance, \$1,200. We believe that the state's property should be fully insured, but to do this we must have a special appropriation.

For kitchen apparatus, steam-cookers, etc., \$600. At present we are using old-style kettles, burning wood under them. This is expensive and not at all satisfactory in the work accomplished.

For manual training tools, machinery, etc., \$1,000. Manual training is now recognized as one of the most practical methods in use, as a means of instruction, and as an aid in overcoming habits of indolence, carelessness, and lack of general control.

For improved bathing facilities, \$500. From thirty to fifty of our boys now bathe in one water, in a tank or vat eight feet square and four feet deep. This is not with due regard to health or cleanliness. Other institutions have the shower bath system; our boys should have the best.

For gymnasium apparatus, library books, music, and amusements, \$600. We have no gymnasium apparatus whatever; it is much needed as a means of physical culture and for recreation during inclement weather. Our library is sadly run down and should be replenished. New song books are needed, also special music. The boys take great interest in their songs, and their hearty singing is one of the chief attractions at all of our gatherings. Also as an important moral agent, the influence of good music can hardly be estimated.

We are yet without a respectable chapel. The room now in use is too small and wholly unfit for public service.

RECAPITULATION OF OUR MOST URGENT NEEDS.

For maintenance (in addition to cash receipts).....	\$60,000
Electric light plant.....	2,500
Steam heating plant.....	2,500
Laundry machinery.....	1,100
Insurance	1,200
Kitchen apparatus, steam cookers, etc.....	600
Manual training.....	1,000
Bathing improvements.....	500
Gymnasium, library, music and amusements.....	600
Total	\$70,000

We desire to assure you that the above requests represent only actual and most pressing needs, and urge that appropriations fully covering the same be made.

The health of the inmates continues remarkably good. No deaths have occurred during the term.

We close this report by calling attention to the work of Superintendent Barnard L. Olds, which can not be too highly commended. His entire time and thought have been devoted to the good of the school, and its successful working has been largely due to his untiring zeal and interest. He has been ably aided by Assistant Superintendent Frank G. Mirick, and the other officers who have been engaged with him. At no time during the history of this institution has the discipline been better. This gratifying evidence of disciplinary advancement, coupled with manifold improvements made in grounds and buildings, merits for officers and employés the highest commendation of the board and public.

Respectfully submitted,

C. W. LAKE,

President.

W. A. SMITH,

Secretary.

CHAS. LANDIS.

SUPERINTENDENT'S REPORT.

Golden, Colorado, November 30, 1898.

To the Honorable Board of Control, State Industrial School:

Gentlemen—I herewith submit my report, covering the period from November 30, 1896, to December 1, 1898.

From the beginning of the present biennial term, the institution was under the immediate charge of Superintendent Robert G. Smither, until January 17, 1898, when his resignation was accepted by the board of control, and his relations with the school terminated.

From that date, Capt. Wm. A. Smith, secretary of the board of control, was acting superintendent until March 1, when the present incumbent assumed charge.

The grounds and buildings generally were found to be in a satisfactory condition. Many improvements had been made by Superintendent Smither, adding greatly to the sanitary condition of the institution, and also to the comfort of the inmates and officers. Among the principal ones, the following may be noted:

The large brick carpenter shop was converted into a most excellent hospital, with one ward containing ten beds, attendant's quarters, bath room, etc., all with modern appliances.

Three summer houses were constructed for the comfort and pleasure of the boys.

A large reserve water tank was erected and connected with the service mains.

A root cellar of brick, with iron roof, size 18x30 feet.

A conservatory adjoining the administration building, built of brick and glass, 10x20 feet.

The laying of 2,000 feet of four-inch iron pipe, connecting the Golden water system with our wells, and the installation of a large steam pump, thus greatly adding to the fire protection.

The cost of these improvements was necessarily paid from the maintenance fund, greatly depleting the same. On March 1 we found a balance of but \$12,054.56 with which to meet the expenses for the remaining nine months of the biennial term; we have had, therefore, to practice the most rigid economy, and it has not been possible to make improvements involving much expenditure of money. We have, however, at a small outlay, made important changes and improvements, a few of which are mentioned.

The steam-heating system has been so changed that one boiler now frequently does the work done by two, making a saving in fuel.

Our sanitary condition has been improved by relaying and changing some of the branch sewer lines. Other changes are needed to make a safe and perfect system.

A brick pantry has been built adjoining the kitchen, adding much to the convenience and economy of the work to be performed.

A bath room, with modern improvements, has been put in the building occupied by the officers, and the necessary connections made with the water, steam, and sewer systems.

Six watchman's registering clocks have been placed in the dormitories and exposed buildings. These are punched by the watchman as he makes his rounds; thus a perfect record of his visits are kept.

The interiors of many of our buildings have been painted throughout, floors oiled, basements and dormitories painted and kalsomined.

A swimming pool about 50x150 feet, with proper depth, has been excavated in a convenient location, and connected with the irrigation ditch. This pool was a source of great satisfaction to our boys throughout the summer. The coming season we propose to enlarge it and gravel the bottom.

A barber shop has been installed and placed in charge of one of the older boys, who performs the work in a very satisfactory manner, thus materially adding to the appearance of the inmates.

Improvements have been made about the grounds; a new lawn in front of the hospital; new walks laid, and grounds and campus graded.

For the printing office a small amount of new type and furniture has been purchased, and the quality, style, and character of our semi-monthly publication, the "Industrial School Record," greatly improved.

Manual training classes have been organized, using such room and tools as were available, with a few additions to the latter. Improvement is needed in this department, as will be indicated later in this report.

The boys sent to this institution are, in nearly every instance, deficient in writing, and in ability to construct an ordinary letter. We have therefore instituted writing classes, under the direction of a competent teacher, where writing is taught, and special attention is given to the writing of letters.

The work in other departments has been changed and improved, new and modern methods being used, thus bringing the work performed more nearly to the standard of other like institutions, and much in advance of what it has been.

In the boys' dining room important changes have been made. The quality of the food has been improved, and the quantity is not limited. Additions have been made to the table furniture; new dishes and table cloths and napkins have been supplied. The old iron knives and forks have been displaced by new ones of the regular silver pattern and style. Other improvements are needed in this connection, of which I shall speak later.

Pressing Needs.

The paramount need of this institution, is more money for maintenance. Under prevailing conditions, boys are often paroled long before permanent reformation has been accomplished. In many of the best institutions, the average period of detention is three years and more, while with us the average time that a boy remains, is less than one and a half years; too short, by far, to secure change of thought and habit, and to overcome the evil effects of bad associations, supplemented, in many instances, by an utter lack of proper home training. Many of our boys never had a home, and it is folly to expect lasting improvement in so short a period of time. Sufficient funds should be supplied, so that the board of control may feel warranted in keeping boys here, until their reformation is reasonably assured.

Our steam-heating plant is far from complete. Two large buildings are yet unconnected, requiring the use of nineteen

stoves. These stoves are a source of constant danger, as the numerous fires started during the past two years will testify. Special attention is called to the fact that most of these stoves are in the main building, in the third story of which many of our boys sleep. Should a serious fire occur, we could hardly escape without loss of life. \$2,500 will complete the system, making these buildings safe and greatly reducing the cost of heating and of insurance.

At the present time the institution is lighted with electricity, which we receive under contract from the Golden electric company. This light is very indifferent as to quality and costs us a large sum monthly. We should have our own plant, which, with the necessary wiring would cost \$2,500, and thus secure a better light and save this monthly expense.

We are still without machinery for our laundry. We need \$1,100 to make this a fairly modern department. In justice to our boys the change should be made. Laundry work is as much a trade as any other, and we should be in condition to teach the boys how to do the work as it is done outside of the school.

Our dining room is much too small for the proper seating of the boys, and is low and dark. A larger, better lighted, and more cheerful room should be provided, and the table furniture improved, so that the boys may be among pleasant surroundings while at their meals. We can, with these improvements, attain a greater degree of success in teaching proper table manners.

In the kitchen we use the same old methods that were used fifty years ago. We need steam-cookers. Other institutions have them. A great saving of fuel can be made; risk by fire reduced, and food saved by being better cooked and without waste.

At present we are compelled to burn best quality of coal under our boilers, on account of the very poor draft. This can be improved by increasing the height of the chimney some twenty-five feet. We could then burn slack and make a great saving in cost of fuel.

A porch or veranda is needed in front of the main building, over the pavement, where the boys line up before entering the dining room.

An excavation should be made for a cellar under the kitchen, and properly constructed so as to be light and wholesome. We now have only very faulty out-door cellars.

It is a well-known fact that in institutions like this, many boys are afflicted with venereal and other contagious diseases,

and the utmost precaution should be constantly taken, to keep the risk of contagion at the minimum. Other institutions have therefore adopted the individual bath, or shower system. We continue to use the old cement vats, where thirty to fifty boys bathe together, in the same water, to their great risk from disease. Six hundred dollars would change all this, and place us abreast of the times.

Our Schools.

The schools are graded after the public school system, as far as possible, and are under the care of competent teachers, who are required to pass the regular public examination. Every boy must attend school each alternate day. School hours are from 8:30 to 11:40 a. m. and from 1 to 4 p. m. Only the common branches are taught at present. Bookkeeping should also have a place. Writing classes are held evenings from 4:10 to 5:10 and from 6:10 to 7:10. We need new books, maps, and appliances in order to secure the best results.

Trade Schools.

Our trade schools are not what they should be. We teach trades only incidentally, as the needs of the institution require. An opportunity is, however, given a number of the boys to acquire a limited knowledge of carpentry, tailoring, shoemaking, laundering, printing, the care of steam boilers, of live stock, farming, and gardening. Our facilities are too limited and the time too short to give a thorough knowledge of these trades, but is sufficient to enable them to do the work of the institution, making all the shoes and clothing, doing all the baking and printing, and after they leave the school, to assist them in obtaining employment at moderate wages.

Much improvement is needed in facilities for the teaching of these trades more perfectly, and other trades should be introduced, such as blacksmithing, painting and bricklaying.

The doing of the necessary work of the institution is a very important part of the boy's life here, yet not its most vital part.

Our aim is first of all, to inspire him with the thought that his life may and must be better. We begin by teaching him that there must be strict obedience to rules, prompt compliance with every call made upon him, and that all evil acts, vulgar expressions, and bad habits must be abandoned. Next, we supply for the boys' tireless energy, a proper channel for its development and use.

We therefore endeavor to find work for each boy. Every alternate day, one-half of the boys are not in school and are as-

signed to the various departments, trades, and manual training schools. We aim to have no idle boys, for the old adage was never more true than now, that "Satan finds some mischief still for idle hands to do."

Manual Training.

Manual training is taking an advanced place in all reform and industrial institutions, as the measure best calculated to bring the disorderly boy to habits of order; the heedless boy to thoughtfulness, the slow-minded one to quickened thought; the boy without self-control to thorough control; the willful boy to obedience of rules; the insubordinate boy to prompt obedience, and the vicious boy to a higher and better plane of thought. This is no longer mere theory, but fact, as has been demonstrated again and again in many of the very best institutions.

Even in the short time that it has been in use here, we have found that some of our dullest boys are being wonderfully quickened in thought and intellect, that some of our most disorderly boys, those seemingly without self-control, are becoming orderly and attentive, and are deporting themselves better in connection with their other duties and studies. Institutions of this character should be training schools in the broadest sense. Boys are sent here to be reformed morally, to have their sense of right strengthened and the good in them brought forward and developed.

An industrial school should be therefore very much more than a sanitary home, a place of detention among good influences, more even than a place of competent intellectual training. We go farther, and say, that mental and intellectual training should give place, if necessary, to whatever will assist most in attaining the highest standard of success, in moral training and development.

We are firm in the belief that all who have had experience in the matter, or who from proper data have carefully studied the subject, will readily and fully agree with us, that for the best results in attaining a proper self-restraint or control, among all classes of boys, no one thing can do more than a properly organized manual training school, complete in all its branches. Space and appliances should be provided so that each boy may have the advantage of such a course of training.

The prime purpose, in this training, is purely educational, and not to make a mechanic of the boy, but to stimulate him in his entire being, teach him self-control and its score of kindred

virtues; secondarily, the technical knowledge gained will be helpful in many ways in after life.

Here the boys are taught the first principles of mechanical and free-hand drawing; of measurements (feet, inches, and fractions of an inch), of squares, cubes, cylindrical, and irregular shapes; of straight, level, and uneven surfaces; also the first principles of cutting, leveling and sizing, to give dimensions and lines, of objects in both wood and iron. They are also taught the names of different kinds of wood and metal.

As before stated, these points are secondary in importance, the prime object being to help the boy attain to habits of perfect self-control, and to bring him to a complete knowledge of the fact, that law and order must and do govern in all things, the boy himself included, and that he must conform to the general rule, or go under.

It is very gratifying to note with what interest the boys enter upon the work, and herein lies much of the value.

Our present manual training room is much too small, and is wanted for other purposes. We also need new benches, tools, lathes, saws, forges, and vises; also drawing instruments.

I trust that a proper appropriation, for these very necessary appliances, may not fail.

Music, Band, etc.

During the past three or four years, I am informed, there has been no band or orchestra in this school. Believing that good music is of very great assistance in keeping the boys contented and happy, thus aiding in many ways our efforts towards training and improvement, we therefore suggest, that a proper allowance be made to purchase such instruments as may be needed, together with the necessary music. We also desire to improve the vocal music of the school; to organize classes, and to encourage singing in the separate families or companies. Our matron is a competent teacher, but we need an organ in each company, also song books, new music, etc. With these helps, our singing can be greatly improved, and become even more than at present, a pleasure to the boys, and a matter of pride to the officers and teachers.

The Library.

Our library should be well supplied with good, entertaining, and useful books. Magazines and periodicals should be subscribed for. The boys are great readers and should be encouraged.

Religious and Moral Instruction.

Two services are held in the chapel on the Sabbath. Sunday school at 2:30 o'clock in the afternoon, and a song service at 6:20 o'clock in the evening. The International lessons are used. These lessons, with explanations, responsive exercises, and music, make a very interesting service. Several clergymen from Golden alternate in coming to assist in these services. The lessons are taught by three ladies, who come regularly each Sunday from Golden. Opportunities have been given the Catholic clergy to hold regular services on the Sabbath.

Once each week, usually Friday evening, we come together in chapel, to hear some good lecturer on a popular topic, to spend a pleasant evening in song, or in listening to recitations, etc.

Grace is said before each meal, and prayer at retiring.

We should have a chaplain who can give his entire time to the interests of the school. He would be very helpful in looking after paroled boys, and in securing homes for those who have none. In many other ways his services would be of great benefit to the school.

Health of Inmates.

The health of the school has been nearly perfect, no deaths having occurred, and very few cases of serious illness.

Last winter there were several cases of pneumonia. In June we had one severe case of pneumonia, contracted while the boy was an escape, but with careful treatment he entirely recovered.

Whooping cough has recently been epidemic, but all who have had it are recovering.

All boys not vaccinated previously, have had that operation performed during the last two months.

Recreation.

Recreation is a necessary part of a boy's life. "All work and no play, makes Jack a dull boy." We therefore provide regular hours for play, and each boy is expected to take his share.

Games of football, baseball, marbles, tops—in fact, any game that is not harmful, is allowed. In pleasant weather these games are played out of doors, but in stormy and cold weather we are without a suitable place in which the boys can play. We should have a gymnasium fitted up with turning poles, parallel bars and other inexpensive athletic apparatus. Also a suitable fund should be provided from which games, balls, and bats could be purchased.

The state assumes the parents' position toward these boys; let it therefore provide for them such things as are invariably found in all well regulated homes.

Discipline.

Excellent progress has been made in the training of the boys; a wholesome discipline is maintained, and a case of insubordination is rarely or never known.

Good order is the rule, and the best and kindest feelings exist; so much so that visitors are impressed with the very cordial relations existing between boys and officers. Strict obedience is at all times required.

A punishment is never administered in anger, and the one on whom the punishment is inflicted, is made to see the gravity of his offense, and to feel that simple justice is being meted out to him. In cases of corporal punishment, the superintendent, or assistant superintendent, is present to see that no unusual severity is resorted to, and that the one imposing punishment does it in a kind and dignified manner.

This institution is not maintained for the punishment of offenses, but for the reformation of character. Our aim is not restraint and limitation of privileges, but cultivation and development of the good lying dormant in the boy's nature.

Difficulties.

Often after a boy has been sent here, his parents, or friends (so-called) begin almost immediately a systematic agitation for his release. The usual argument is to the effect that "Johnnie was always a good boy, and we believe that he has been punished enough." Frequently the parents state, that they had the boy committed, just for a little lesson, and they are certain he is now ready to come home and will give no further trouble.

This is all mistaken sympathy, and it is the height of folly to suppose, that in a few short months, we can correct the habits of years; change the entire moral nature; teach him some honorable trade; and send the boy out to be a law-abiding and self-supporting citizen.

Many boys come to us with very limited ideas of personal cleanliness, moral purity, or religious culture. Many are diseased mentally, morally, and physically, and require skillful attention. We believe that none but the most conscientious, the most intelligent, and those best qualified by study and experience, should be employed in this work.

Given a corps of cultured, large-hearted, broad-minded men and women, and we will show you a school whose standard is high; change the conditions and the school will be neither satisfactory to the state nor pleasing to ourselves.

Acknowledgments.

I desire to acknowledge the valuable and continued assistance in our Sunday school exercises, of the several clergymen of Golden, notably Reverends Coulter, Smith, and Cook; also to mention the constant and faithful services rendered by Mrs. J. H. Brown, Misses Hattie Mencimer, Nellie Coulter, and Maud Flint, who have visited us each Sabbath, regardless of storm or heat, and have so faithfully taught their regular classes in the Sunday school.

We are also indebted to Mrs. Brown and the flower mission of Golden, for the beautiful bouquets that came for each boy every Sunday during the summer.

To Professor E. B. T. Spencer of Denver University, who so kindly arranged last winter's lecture course for us, we are under lasting obligation.

To the many able ladies and gentlemen, who have entertained and instructed us at our week evening gatherings, we desire to express our great appreciation of their kindness, and beg to voice the desire of the boys and officers alike, that they "come again."

In conclusion, I desire to express to the members of the board of control, my keen appreciation of their deep personal interest in the welfare of the school, and of their individual, uniform courtesy and kindness to me while I have been in charge.

To Assistant Superintendent Frank G. Mirick and the entire staff of officers and employés, I desire to return thanks for their loyalty, and prompt coöperation, in the endeavor to so conduct the affairs of the school, that it might be a credit to our state, and an honor to all concerned.

I would not forget the boys, who often under trying conditions, have rendered prompt and cheerful obedience to the calls made upon them. They have my hearty good-will and appreciation.

In all our ways we desire to acknowledge Him, who rules over all, that He may direct our paths.

With gratitude to God for His abundant mercies, I close this report.

Respectfully submitted,

BARNARD L. OLDS,

Superintendent.

PHYSICIAN'S REPORT.

Golden, Colorado, Nov. 30, 1898.

To the Honorable Board of Control:

I have the honor to submit the following report, of the work done in the medical department, during the biennial term just ended:

Two hundred and twenty-three (223) cases, have been treated in the hospital, since the last report.

At the present time the boys generally are healthy, and their condition is excellent.

It affords me pleasure to note, that many suggestions made in my last report have been adopted, thus greatly improving the sanitary condition of the school. In the last report I called to the attention of the Board, the necessity of an improved bathing system. I still advocate the change. This is a sanitary measure and should receive your careful attention.

Respectfully yours,

JOHN KELLY,
Physician for School.

The following tabulated statement is compiled from the records of this institution for the period intervening between November 30, 1896, and December 1, 1898:

EXHIBIT "A."

SHOWING NUMBER OF INMATES RECEIVED EACH MONTH.

December, 1896.....	6
January, 1897.....	3
February, 1897.....	6
March, 1897.....	3
April, 1897.....	2
May, 1897.....	9
June, 1897.....	7
July, 1897.....	9
August, 1897.....	5
September, 1897.....	9
October, 1897.....	6
November, 1897.....	5
December, 1897.....	5

January, 1898.....	3
February, 1898.....	2
March, 1898.....	3
April, 1898.....	6
May, 1898.....	13
June, 1898.....	10
July, 1898.....	5
August, 1898.....	6
September, 1898.....	3
October, 1898.....	6
November, 1898.....	1
Total	133

EXHIBIT "B."

SHOWING LENGTH OF SENTENCES.

Six months.....	1
One year and one month.....	2
One year and six months.....	1
Two years.....	2
Two years and six months.....	1
Three years.....	2
Minority	124
Total	133

Note.—The above time sentences are United States prisoners.

EXHIBIT "C."

SHOWING FROM WHAT COUNTIES BOYS HAVE BEEN RECEIVED.

Arapahoe	40
Bent	2
Boulder	3
Chaffee	2
Delta	1
Douglas	1

El Paso.....	10
Fremont	1
Gilpin	1
Garfield	5
Jefferson	2
Kiowa	2
Logan	1
La Plata.....	2
Lake	5
Lincoln	1
Las Animas.....	2
Larimer	2
Morgan	3
Mesa	1
Montezuma	2
Montrose	4
Ouray	2
Otero	6
Pueblo	12
Pitkin	1
Prowers	2
Weld	3
State of Wyoming.....	5
State of California.....	2
State of Kansas.....	2
State of Utah.....	2
State of North Dakota.....	2
State of Colorado.....	1
Total	

133

EXHIBIT "D."

SHOWNG AGES WHEN RECEIVED.

Ten years.....	10
Eleven years.....	11
Twelve years.....	16

Thirteen years.....	13
Fourteen years.....	29
Fifteen years.....	38
Sixteen years.....	14
Seventeen years.....	2
Total	133

EXHIBIT "E."

SHOWING NATIVITY OF BOYS.

Arkansas	1
Colorado	44
California	1
Connecticut	1
Illinois	8
Indiana	1
Iowa	4
Indian Territory.....	1
Kansas	10
Kentucky	2
Missouri	9
Massachusetts	3
Michigan	2
Minnesota	1
New York.....	5
Nebraska	7
New Mexico.....	2
Ohio	2
Pennsylvania	3
South Carolina.....	1
South Dakota.....	1
Tennessee	2
Utah	3
Virginia	3
Wisconsin	1
Wyoming	3

England	1	
France	1	
Germany	3	
Ireland	2	
Italy	3	
Indian	2	
<hr/>		
Total		133

EXHIBIT "F."

SHOWING NATIVITY OF PARENTS.

Denmark	1	
England	5	
France	2	
Germany	13	
Ireland	10	
Italy	8	
Indian	2	
Mexico	3	
Sweden	1	
United States.....	86	
Wales	2	
<hr/>		
Total		133

EXHIBIT "G."

SHOWING OFFENSES FOR WHICH COMMITTED.

Arson	1	
Assault and battery.....	8	
Burglary	21	
Disturbing the peace.....	1	
Embezzlement	2	
Incorrigible	2	
Juvenile delinquent.....	3	
Larceny, petit.....	78	
Larceny, grand.....	11	

Obtaining money on false pretense.....	2	
Robbery	3	
Trespass	1	
	<hr/>	
Total		133

EXHIBIT "H."

SHOWING SOCIAL CONDITION OF BOYS RECEIVED.

Both parents living.....	71	
One parent living.....	52	
Both parents dead.....	7	
Parents separated.....	1	
Unknown	2	
	<hr/>	
Total		133
Stepfather	14	
Stepmother	11	
Without step-parents.....	108	
	<hr/>	
Total		133
Parents who own property.....	39	
Parents who have no property.....	94	
	<hr/>	
Total		133
Boys who have been inmates of other institutions.....	9	
Boys who have never been inmates of other institutions....	124	
	<hr/>	
Total		133
Boys who have been arrested before.....	45	
Boys who have never been arrested before.....	88	
	<hr/>	
Total		133

EXHIBIT "I."

SHOWING SCHOLARSHIP WHEN RECEIVED.

First grade.....	1
Second grade.....	21
Third grade.....	22
Fourth grade.....	45

Fifth grade.....	21
Sixth grade.....	10
Seventh grade.....	5
Eighth grade.....	4
No schooling.....	4
Total	133

EXHIBIT "J."

SHOWING RELIGIOUS DENOMINATIONS.

Baptist	7
Christian	3
Catholic	25
Episcopalian	1
Jewish	2
Lutheran	4
Methodist	14
Mormon	1
Presbyterian	3
Seven Day Adventists.....	2
No religion or church.....	71
Total	133

EXHIBIT "K."

Number in school at last report.....	117
Number received since last report (two years).....	133
Total	250
Discharged	40
Paroled	82
Escaped	5
Pardoned	6
Number leaving institution during period.....	133
Total number remaining December 1, 1898.....	117

EXHIBIT "L."

SHOWING WORK PERFORMED IN PRINTING DEPARTMENT.

Billheads	2,780
Noteheads	1,075
Letterheads	13,000
Envelopes	7,000
Receipts	240
Reports of all kinds.....	13,675
Orders	970
Blanks of all kinds.....	7,650
Cards of all kinds.....	1,150
Pamphlets	600
Songs	1,450
Sunday school lessons.....	14,750
Circulars	2,300
Proposal blanks.....	375
Labels	1,140
Tags	150
"Industrial School Record".....	13,500

EXHIBIT "M."

SHOWING WORK PERFORMED IN TAILORING DEPARTMENT.

Aprons made.....	81
Aprons repaired.....	254
Bed sacks made.....	20
Bed sacks repaired.....	55
Coats made (uniform).....	203
Coats repaired (uniform).....	318
Coats made (fatigue).....	333
Coats repaired (fatigue).....	27
Drawers made.....	212
Drawers repaired.....	1,231
Jackets made (waiters').....	60
Jackets repaired (waiters').....	205
Napkins made.....	36

Napkins repaired.....	3
Pillow cases made.....	201
Pillow cases repaired.....	56
Pillow ticks made.....	16
Pillow ticks repaired.....	3
Shirts made (over).....	743
Shirts repaired (over).....	1,833
Shirts made (under).....	340
Shirts repaired (under).....	843
Sheets made.....	466
Sheets repaired.....	144
Trousers made (uniform).....	193
Trousers repaired (uniform).....	416
Trousers made (fatigue).....	631
Trousers repaired (fatigue).....	2,762
Towels made (roller).....	61
Tables cloths repaired.....	40
Bed clothing repaired.....	44
Window shades hemmed.....	85
Caps made (uniform).....	260
Caps repaired (uniform).....	30
Pairs of stockings darned.....	4,305

EXHIBIT "N."

SHOWING WORK PERFORMED IN CARPENTER
DEPARTMENT.

Tables made.....	27
Tables repaired.....	40
Ladders made.....	14
Ladders repaired.....	31
Window and door frames made.....	19
Window and door frames repaired.....	101
Screens, doors and windows made.....	11
Screens, doors and windows repaired.....	29
Cupboards made.....	6
Cupboards repaired.....	22

Curtains repaired.....	26
Stools repaired.....	20
Chairs repaired.....	212
Lockers made.....	7
Sashes repaired.....	4
Panes of glass put in.....	476
Feet of flooring laid.....	391
Floors repaired.....	15
Irrigation flumes repaired.....	2
Making and putting up shelving.....	83
Beds repaired.....	28
Feet of flume made.....	156
Summer houses built.....	3
Porches built.....	2
Hose house built.....	1
Feet of ceiling.....	600

EXHIBIT "O."

SHOWING WORK PERFORMED IN SHOE DEPARTMENT.

Boys' shoes made.....	1,005
Boys' shoes repaired.....	3,045
Sets of harness repaired.....	85
Bridles repaired.....	18
Halters repaired.....	12
Suspenders repaired.....	469
Saddles repaired.....	6
Horse collars repaired.....	7
Carriage tops repaired.....	2

EXHIBIT "P."

SHOWING WORK PERFORMED IN BLACKSMITHING AND ENGINEERING DEPARTMENTS.

Farming implements repaired.....	5
Scrapers, shovels, picks and hoes repaired.....	175
Wagons repaired.....	20

Cooking utensils repaired.....	135
Stoves, ranges, etc., repaired.....	27
Laundry machinery repaired.....	3
Tubs and buckets repaired.....	265
Pumps repaired.....	10
Steam pipes repaired (feet).....	106
Radiators repaired.....	12
Steam heaters repaired.....	3
Water mains repaired (feet).....	75
Surface pipes repaired and laid (feet).....	605
Hydrants repaired.....	14
Rubber hose repaired (feet).....	625
Lead pipe (feet).....	210
Locks repaired.....	5
Steam pipe laid.....	275
Water closets repaired.....	47
Water bibs repaired.....	75
Water valves repaired.....	7

EXHIBIT "Q."

SHOWING WORK PERFORMED IN LAUNDRY DEPARTMENT.

Aprons	675
Bedspreads	810
Blankets	240
Drawers	1,080
Dresses	450
Handkerchiefs	4,800
Jackets	60
Napkins	6,240
Night dresses.....	600
Night shirts.....	790
Stockings, pairs of.....	535
Socks, pairs of.....	975
Shirts	750
Sheets	3,000
Slips	3,250

Table cloths.....	1,125
Towels, linen, bath and rollers.....	15,000
Under vests.....	360
Underskirts (starched).....	450
Underskirts (plain).....	300
Undershirts	725
Waists (starched).....	410
Waists, child's (starched).....	385
Aprons, waiters'.....	2,640
Bedspreads, boys'.....	2,400
Blankets, boys'.....	2,000
Bed sacks.....	1,000
Drawers, cotton flannel.....	3,150
Overalls	14,400
Pillow cases.....	12,500
Pillow ticks.....	1,200
Socks, pairs of boys'.....	13,500
Shirts (over).....	13,200
Shirts (under).....	3,100
Shirts, boys'.....	11,500
Trousers	365
Jackets, waiters'.....	2,100

EXHIBIT "R."

SHOWING FRUITS, VEGETABLES, ETC., PRODUCED ON FARM.

Alfalfa, tons.....	135
Bunches of asparagus.....	247
Gallons of beans.....	800
Bushels of beets.....	575
Dozen ears of corn.....	1,700
Heads of cabbage.....	5,851
Heads of cauliflower.....	291
Bushels of carrots.....	440
Bushels of cucumbers.....	117
Bunches of lettuce.....	5,101
Muskmelons	3,596

Bushels of onions.....	599
Bunches of table onions.....	7,852
Gallons of peas.....	1,659
Bushels of parsnips.....	205
Pounds of pumpkins.....	28,550
Dozens of peppers.....	40
Bunches of radishes.....	5,979
Pounds of spinach.....	1,650
Pounds of squash.....	2,515
Pounds of salsify.....	1,650
Bushels of turnips.....	244
Pounds of tomatoes.....	10,124
Watermelons	2,096
Bunches of rhubarb.....	3,405
Bushels of okra.....	16
Bunches of parsley.....	228
Bushels of apples.....	190
Quarts of currants.....	1,288
Quarts of blackberries.....	3,495
Bushels of plums.....	5
Pounds of grapes.....	1,794
Quarts of raspberries.....	1,193
Quarts of strawberries.....	2,096
Quarts of cherries.....	347

EXHIBIT "S."

SHOWING FRUITS AND VEGETABLES PUT UP FOR USE OF SCHOOL.

Quarts of currants.....	115
Quarts of blackberries.....	250
Quarts of raspberries.....	125
Quarts of tomatoes.....	450
Quarts of tomato chili sauce.....	75
Quarts of grapes.....	160
Quarts of strawberries.....	21
Quarts of rhubarb.....	102

Quarts of sweet pickled tomatoes.....	95
Quarts of chow-chow.....	100
Barrels of sauerkraut.....	21
Barrels of pickled cucumbers.....	4
Quarts of jellies (all sorts).....	25

EXHIBIT "T."

SHOWING MILK, BUTTER, EGGS, PORK AND VEAL PRODUCED ON FARM.

Gallons of milk.....	14,265
Pounds of butter.....	1,869
Dozens of eggs.....	460
Pounds of pork.....	1,125
Pounds of veal.....	1,050

EXHIBIT "U."

SHOWING NUMBER OF HEAD OF STOCK, FOWLS, ETC.

Horses	8
Hogs and pigs.....	28
Cows, bulls and calves.....	15
Chickens	26

EXHIBIT "V."

SHOWING CASH RECEIPTS.

Board	\$ 4,072 82
Subscription to "Record".....	14 20
Advertising in "Record".....	43 25
Sale of live stock.....	356 30
Old junk.....	29 55
Shade trees and vegetables.....	10 75
Railroad tickets.....	22 57
Pasturing stock.....	51 25
Shoe repairing and tailoring.....	15 60
Clothing, etc., to inmates discharged.....	37 15
Plush to inmates.....	8 50
Total.....	\$ 4,661 94

EXHIBIT "W."**SHOWING EXPENDITURES UNDER THE DIFFERENT
ACCOUNTS.**

Salaries.....	\$23,894 47
Stationery and expenses of office.....	840 06
Subsistence.....	7,612 77
Clothing.....	1,702 52
Shoes.....	1,408 17
Beds, bedding and towels.....	222 26
Hospital.....	112 90
General expenses.....	2,335 25
Discharged inmates.....	468 85
Escaped inmates.....	321 00
Furniture and fixtures.....	361 11
Library.....	32 50
Farm and garden.....	2,163 50
Improvements.....	5,871 62
Repairs.....	516 10
Fuel.....	3,872 42
Light.....	1,693 58
Tools and implements.....	291 37
Freight and express.....	275 42
Insurance.....	320 00
Printing office.....	139 17
School supplies.....	206 30
Total.....	\$54,661 94

RECAPITULATION.**Maintenance Fund.**

Appropriation	\$50,000 00
Vouchers issued.....	\$50,000 00

Cash Fund.

Cash receipts.....	4,661 94
Vouchers issued.....	4,661 94
	<hr/>
	\$54,661 94 \$54,661 94
Vouchers issued in excess of appropriation.....	\$4,795 08

State Board of Charities and Correction.

State Capitol. Denver, Colo., June 30, 1898.

HON. GRACE ESPY PATTON,

Superintendent of Public Instruction,
Denver, Colorado.

Madam—In accordance with your request, I have the honor to submit herewith a report of the State Industrial School for Boys, the Industrial School for Girls, and the State Reformatory.

Very respectfully,

C. L. STONAKER,

Secretary State Board of Charities and Correction.

The State Industrial School for Boys located at Golden was organized by act of the legislature, approved February 12, 1881. Boys between the ages of seven and sixteen years, who shall be convicted of any offense known to the laws of this state, and punishable by fine or imprisonment, or both, except such as may be punishable by imprisonment for life, shall be sentenced to the State Industrial School for Boys for an indefinite term, which, however, shall not be longer than during their minority nor less than nine months.

The board of control have power to make such rules and regulations as may be deemed necessary for preserving order, for enforcing discipline, for imparting instruction, for preserving the health, and generally for the proper physical, intellectual, and moral training of the youth committed to the school.

The industrial idea of reformatories for juvenile delinquents has gained ground rapidly in this country, and instead of being a place of detention or a house of correction, the idea now is that embodied in the expression "proper physical, intellectual, and moral training of the youth."

The progress being made in this country in manual training, and the admirable results obtained thereby, has encouraged the

managements of reformatory institutions to apply manual training in a practical way in all juvenile reformatories.

Some years ago, manual training was introduced at the Golden Reformatory, but by reason of deficient appropriation, it was not continued. Under the present management, however, the manual training instruction has been started again, and will, no doubt, be made a permanent feature of the school.

The schools at the Industrial School are modeled closely after the public school system of this state. The teachers are required to attend institutes, and pass examinations for certificates, as is the rule with teachers in the common schools.

The Industrial School for Girls, occupying temporary quarters at Aurora, was organized under an act, approved April 28, 1897. For a number of years, girls were committed to the Industrial School for Boys at Golden, but they were removed and the counties paid for their care at the House of the Good Shepherd. The amended act of 1897 failed to include an appropriation for the maintenance of that institution, but regardless of this fact, a board of control named by the Governor undertook, by aid of private contributions and the per diem payment from counties from which girls had been sentenced, carried on the work on an independent basis. The difficulties of establishing a school of this kind without property, and without revenue, save the meager funds at the disposal of the board, resulted in turbulence and disorder for which no person could be directly held responsible. It is hoped that a proper appropriation will be made by the legislature for the establishment of this school upon a permanent basis.

Girls between the ages of six and eighteen years, who shall have been convicted of any offense known to the laws of the state, punishable by fine or imprisonment, or both, except such as may be punishable by death or imprisonment for life, may be sentenced to the State Industrial School for Girls for the term of the girl's minority, or until she shall be paroled and discharged according to the rules adopted by the board of control. The board of control is authorized to adopt rules and regulations for the government of the inmates looking to their moral, physical, intellectual, social, and industrial training. Domestic industries shall take precedence of trades, and there shall be a thorough education in every branch of household work. The board of control during the past year has employed a teacher, and regular hours of school work have been observed. What is needed for this institution are permanent quarters where outdoor occupation

such as gardening, floral culture, poultry raising, and light farm work may be conducted as well as systematic instruction in domestic science.

Educational work of a modest kind is done at the State Reformatory at Buena Vista and at the State Penitentiary at Canon City. At the reformatory, the chaplain gives individual instruction in the cells where the common branches are taught, and under his careful instruction, the individual progress of the young man is remarkably rapid. Boys committed, who have no knowledge of the rudiments, even unable to write their name, in a few months are taught to write letters, read, and do simple problems in arithmetic.

In the state penitentiary, night schools are conducted in the chapel three times a week, save during the busy season of mid-summer. This school is under the superintendency of the present chaplain, and the teachers are the educated convicts. The classes are graded according to nationalities and individual needs. A class of Chinese convicts, one of Mexicans, one of Italians, one of Bohemians are each making good progress.

C. L. STONAKER,

Secretary of the State Board of Charities and Correction.

Annual Meetings

Colorado State Teachers' Association, 1896 and 1897.

Association of County Superintendents, 1897 and 1898.

COLORADO STATE TEACHERS' ASSOCIATION.

1896.

The twenty-second annual session of the Colorado State Teachers' Association was held at the East Denver High School, Stout street, between Nineteenth and Twentieth streets, Denver, Colorado, December 28, 29, 30 and 31, 1896.

Officers of General Association—President, Preston K. Pattison, Denver, Colorado; secretary, Fred Dick, Denver, Colorado; treasurer, Warren E. Knapp, Denver, Colorado.

Directors—One year, L. C. Greenlee, Denver, Colorado; two years, Fred Dick, Denver, Colorado; three years, James H. Hays, Greeley, Colorado.

ANNOUNCEMENTS.

Monday, December 28.—2 p. m.—Educational Council.

Tuesday, December 29.—9:30 a. m.—Kindergarten section, Auditorium; 9:30 a. m.—Psycho-manual section, Room 2; 2:00 p. m.—Superintendents' and principals' round-table, Room 1; 2:00 p. m.—Science section, Room 3; 8:00 p. m.—President's address and reception to the teachers, Auditorium.

Wednesday, December 30.—9:30 a. m.—Science section (second session), Room 3; 9:30 a. m.—Child-study section, see program; 9:30 a. m.—County superintendents' section, Room 4; 9:30 a. m.—College and high school section, Auditorium; 2:00 p. m.—General association, Auditorium; 8:00 p. m.—Lecture by Superintendent J. M. Greenwood, Kansas City, Auditorium.

Thursday, December 31.—9:30 a. m.—General association, Auditorium.

Papers are limited to twenty minutes. Discussions: Leaders ten minutes, all others five minutes.

PROGRAMME.**Monday—Afternoon and Evening.**

Educational Council—Room 1—Order of Business:

1. Report of committees: School Law: W. H. Smiley, William Triplet, Ira M. DeLong. School fund: Aaron Gove, E. F. Hermanns, J. S. McClung, F. D. Ball.

2. Discussion: Is the course of study of the Colorado schools in line with advanced pedagogical movements? (1) The Course for the Grades, W. H. Smiley. (2) The Course for the High School, John A. Hancock.

Z. X. SNYDER, President.

Tuesday—9:30 A. M.

1. Symposium from Kindergartens of the East and South.
2. Gesture. Sarah B. Barber, Greeley.
3. Literature for Children. E. S. Parsons, Colorado Springs.
4. Art in the Kindergarten and Primary.

(a) The Professional Standpoint. Emily Miles, Denver.

(b) From an Amateur's Point of View. Grace Espy Patton, Fort Collins, State Superintendent of Public Instruction-elect.

(c) The Artist's Idea. Charles H. Carter, Denver.

(d) Relation Between Art and Morals. Dr. J. H. Ecob, Denver.

Discussions.

LAURA TEFFT, President.

Psycho-Manual Section.—9:30 a. m.—Room 2.—Programme:

1. Reading of minutes of preceding meeting.

2. Paper: Manual Training and Moral Culture. President W. F. Slocum, Colorado College.

Discussions.

3. Paper: Manual Training in the Smaller School Districts. How it may be introduced without great expense. Cree T. Work, Greeley, Colorado. Discussion. William Shumway, Denver.

4. Paper: Cooking and Domestic Science for Eighth Grade Girls, Helen M. Walker, Denver. Discussion. Theodosia G. Ammons, Fort Collins.

Unfinished business.

CHARLES A. BRADLEY, President.

Superintendents' and Principals' Round-Table—2:00 p. m.—
Room 1.—Subjects for Discussion—

1. Examination of Pupils—By whom, for what Purpose and how Often?
2. Science in the High School—What shall it Embrace?
3. How can we get better Results in English in the Grades?
4. Shall we Enforce the Compulsory Attendance Law?
5. What are the Results of the Introduction of Vertical Writing?
6. Should the Teacher Use His Influence Actively and Aggressively in the Interest of Good Government?
7. Is the Course of Study for the Public Schools of Colorado in Line with Progressive Educational Thought? (1) As to the Grades? (2) As to the High School?
8. Is It Desirable to have Six Years Course in Elementary Schools, and Six Years Course in High School?
9. Certificating Teachers in Districts of the First Class.
10. Civics—How should it be taught to Prepare the Child for Citizenship?
11. Duties of Principal to His Grade Teachers?
12. What Books should be Selected for a School Library?
13. What Games shall be Encouraged on the Play Ground?
14. Are Short Business Courses, in Addition to Regular Courses, Desirable?
15. How Often Should New Classes be Admitted to the Primary Grade?
16. A Systematic Course in Science in Grammar Grades as Basis for High School.
17. Psychology and Child-Study for the Ordinary School Teacher.
18. Should the Study of General Geography be Correlated with General History?
19. Should the School Day be made longer that there may be time for more Laboratory Work?

J. F. KEATING., President.

Science Section.—2:00 p. m.—Room 3—

1. Reading of minutes.
2. Appointment of Committees: (1) On nominations. (2) On resolutions.
3. Report of Committees: (1) Physics. (2) Chemistry. (3) Third year science. (4) Nature study. (5) Reorganization of high school studies.

Report of nominating committees.

General Association.—8:00 p. m.—Auditorium.

Music—Apono Club.

President's Address—P. K. Pattison.

Music—Apollo Club.

Reception.

— — —

Wednesday.

Science Section, second session.—9:30 a. m.—Room 3—

1. President's Address and Paper: Teaching Astronomy.

2. Teaching of Botany. E. Bethel, Denver.

3. Fundamental Laws of Chemistry, President Regis Chauvenet, Golden.

4. Installation of officers.

H. A. HOWE, President.

Child-Study Section.—9:30 a. m.—

The secretary of the association is in receipt of the following letter:

Durango, November 18, 1896.

Dear Mr. Dick:—It now appears that I shall not be able to leave here during the vacation, on account of work which I must oversee. In view of this fact, however, as well as for other reasons, I shall have no time that I can give further to child-study work for the association. I wish to resign the presidency of the child-study section.

I recommend the joint meeting of the kindergarten and child-study section. Dr. Snyder will have something to say on "The Growth of Memory in School Children," and Superintendent Van Sickle will discuss the report on "Syllabus No. 1," of which I mail you a copy.

I regret any annoyance this may cause the committee, yet this is the earliest that I could say definitely that I was so likely to be detained here.

Yours truly,

(Signed)

JOHN A. HANCOCK.

In view of the above letter, the committee has thought best to recommend a joint meeting of the child-study section and the kindergarten section, leaving the proper adjustment of the program to the officers of the joint meeting.

County Superintendents' Section.—9:30 a. m.—Room 4—

1. President's address.

2. Needed Reform in Reports, and Clerical Work of School Officers. H. C. Lay, superintendent, San Miguel county.

3. The Ideal Superintendent. Sadie H. Maxey, superintendent, Park county.

4. The True Spirit. How Diffused by the County Superintendent. Elizabeth A. Walker, superintendent, Mesa county.

5. How to Make the Normal Institute More Profitable. W. R. Smethers, superintendent, Las Animas county.

MRS. A. J. PEAVEY, President.

College and High School Section.—9:30 a. m.—Auditorium—

1. Opening meeting.

2. Paper: Physical Science in Secondary Schools. How Much and What? George L. Cannon, Denver. Discussion. President Alston Ellis, Fort Collins. J. P. Jackson, Leadville.

3. Paper: Ethics in the High School. President J. H. Baker, Boulder. Discussion. George B. Turnbull, Colorado Springs.

4. Election of officers and miscellaneous business.

5. Adjournment.

ED. F. HERMANN, President.

General Association.—2:00 p. m.—Auditorium—

Music.

1. Paper: Public Opinion as a Factor in Education. James E. Russell, Boulder. Discussion. D. R. Hatch, Georgetown; Isabel Holloway, South Denver; C. V. Parker, Fort Collins.

2. Paper: Literature in the Grades. Miss Elma E. Ruff, Greeley. Discussion. Miss Clara Chapman, Grand Junction; Miss Flora MacDonald, Leadville; Miss Eunice J. Hubbell, Greeley.

Music.

3. Biology in the Elementary Schools. F. W. Cragin, Colorado Springs. Discussion. C. P. Gillette, Fort Collins; W. A. Hunt, Canon City; E. E. Cole, Pueblo.

8:00 p. m.—

Music.

Lecture. Superintendent J. M. Greenwood, Kansas City. Subject: "Brain Cramp."

Music.

Thursday.

9:30 a. m.—Auditorium—

Music.

1. Paper: Biography as a Factor in Education. A. J. Fynn, Alamosa. Discussion. W. J. Harris, Delta; Miss E. E. Maxwell, North Denver; Mary C. Brown, Trinidad.

2. Paper: Is a Re-adjustment of the Course in the Primary and Secondary Schools Desirable? Ed. G. Arnold, Denver. Discussion. W. J. Roberts, Loveland; E. P. Childs, South Pueblo; W. A. Haggott, Idaho Springs.

Music.

3. Reports of committees.

4. Election of officers.

5. Miscellaneous business.

P. K. Pattison, President. Fred Dick, Secretary.

COLORADO STATE TEACHERS' ASSOCIATION.

1897.

The twenty-third annual session of the Colorado State Teachers' Association was held at the East Denver high school, Denver, Colorado, December 29, 30, and 31, 1897.

Officers of general association—President, A. B. Copeland, Greeley, Colorado; secretary, Fred Dick, Denver, Colorado; treasurer, Warren E. Knapp, Denver, Colorado.

Directors—One year, Fred Dick, Denver, Colorado; two years, James H. Hays, Greeley, Colorado; three years, W. Triplett, Golden, Colorado.

PROGRAMME.

Wednesday, December 29.

9:30 a. m.—Psycho-manual section, Auditorium.

9:30 a. m.—Science section, Room 1.

2 p. m.—Child-study section, Auditorium.

2 p. m.—County superintendents' section, Room 1.

7:30 p. m.—Superintendents' and principals' round table, Room 1.

8:15 p. m.—Concert, Denver philharmonic club, and reception by Denver teachers' club.

Thursday, December 30.

9 a. m.—College and high school section, Auditorium.

11 a. m.—Colorado federation of Women's clubs, Auditorium.

2 p. m.—Kindergarten section, Auditorium.

7:45 p. m.—Business meeting of general association, Auditorium.

8 p. m.—Lecture, Col. Francis W. Parker, Chicago, Illinois, Auditorium.

Friday, December 31.

- 9:30 a. m.—President's address, Auditorium.
 10:30 a. m.—General association, Auditorium.
 2:30 p. m.—General association, Auditorium.

Wednesday.

Psycho-Manual Section, 9:30 a. m.—Auditorium—

President, Mrs. C. E. Dickinson, Denver.

Paper—Henry W. Callahan, head master of state preparatory school, Boulder, "The Relative Value of Manual Training."
 Discussion—Mrs. J. R. Hanna, Denver.

Paper—J. M. Irwin, principal Edison school, North Denver.
 Subject, "Hand-work in the Grades." Discussion—Elizabeth Skinner, North Denver.

Paper—"Warming Up," E. G. Lancaster, professor of psychology and pedagogy, Colorado College. Discussion—J. C. Dana, librarian public library, Denver.

Science Department. 9:30 a. m.—Room 1—

President, Sidney F. Smith, East Denver high school.

1. Business meeting.

Report of committees.

2. Physic—C. J. Ling.

3. Chemistry—H. V. Kepner.

4. Biological sciences—A. M. Collett.

5. Physiographic sciences—G. L. Cannon.

6. Science in the grades—E. G. Dexter.

7. Mathematical sciences—Chas. Burger.

8. Reorganization of high school studies—S. F. Smith.

9. Report of committee on nominations and resolutions.

A second meeting of this section will be held in the Auditorium Thursday at 4:00 p. m. with the following program:

Lecture—Prof. Horace B. Patton, state school of mines, Golden, Colorado. Subject, "The Crater Lake," illustrated by stereopticon views.

Music will be furnished by the Mandolin club of the East Denver high school.

Child-Study Section. 2 p. m.—Auditorium—

President of section, E. G. Dexter, State Normal School, Greeley.

Paper—President of section, "The Child and the Weather."

Address—Mrs. Francis W. Parker, Chicago, Illinois. "Child-Study—Its Practical Application."

Paper—Dr. J. H. Hancock, State University, Boulder, "Mathematics for the Grades." Discussion—F. W. Smith, superintendent of schools, Grand Junction; D. D. Hugh, principal of high school, La Junta.

Music for this section will be furnished by the Lady Teachers' quartette of Denver.

County Superintendents' Section, 2 p. m.—Room 1—

President, Supt. C. W. Bowman, Pueblo.

1. Opening.
2. Reading minutes.
3. Paper—"The Province of the County Superintendent," Fred Dick, principal of Denver Normal and Preparatory school.

4. Paper—"Examination of Teachers"—(a) "Method of Conducting," C. W. Bowman, of Pueblo. (b) "Basis of," Oliver Howard, Weld.

5. Discussion.
6. Miscellaneous.
7. Round table topics: "State Course of Study." "Grade Examinations." "Vacancies in Boards of Third Class Districts." "The 'Current Year.'"

Superintendents' and Principals' Round Table. 7:30 p. m.
Room 1 —

President, W. Triplett, superintendent of schools, Golden.
Subjects for discussion:

1. "Examination of Pupils—By Whom, for What Purpose and How Often?"
2. "Science in the High School—What Shall It Embrace?"
3. "Shall We Enforce the Compulsory Attendance Law?"
4. "Is the Course of Study for the Public Schools of Colorado in Line with Progressive Educational Thought? (a) As to Grades? (b) As to the High Schools?"
5. "Is It Desirable to Have Six Years' Course in Elementary Schools, and Six Years' Course in High School?"
6. "Certificating Teachers in Districts of the First Class."
7. "Civics—How Should It Be Taught to Prepare the Child for Citizenship?"
8. "What Books Should Be Selected for a School Library?"
9. "What Games Shall Be Encouraged on the Play Grounds?"
10. "How Often Should New Classes Be Admitted to the Primary Grade?"
11. "A Systematic Course in Science in Grammar Grades as Basis for High School."

12. "Psychology and Child-Study for the Ordinary School Teacher."

13. "Should the Study of General Geography Be Correlated with General History?"

14. "Should the School Day Be Made Longer That There May Be Time for More Laboratory Work?"

8:15 p. m.—

Complimentary concert by the Philharmonic club of Denver; W. J. Whiteman, director.

Public reception to all visiting teachers, by the Denver Teachers' club.

Thursday.

College and High School Section—9 a. m.—Auditorium—

President of Section, E. R. Downs, principal of North Denver high school.

President's Address—"Notes on an Experiment in Elective Courses for a High School."

Paper—Charles H. Farnsworth, superintendent of music, state university, "Music in the Secondary Schools." Discussion—Rubin Goldmark, Colorado College; W. J. Whiteman, District No. 2, Denver.

Paper—Ida B. Tenney, manual training high school, Denver, "To What Extent Are the Best High Schools Doing Collegiate Work, and How Far Is It Desirable?" Discussion—Gertrude H. Beggs, North Side high school, Denver; Anna M. Ragland, high school, District No. 2, Denver.

Music for this department will be furnished by the Lady Teachers' quartette, of Greeley, Prof. J. R. Whiteman, director.

Colorado Federation of Women's Clubs.—11 a. m.—Auditorium.

President, Mrs. M. D. Thatcher, Pueblo.

1. "Model Mothers' Meeting," Miss Dora Moore, principal Corona school, in charge, Denver. (a) "Teachers' Ideas of Parents' Duties." (b) "Duties of Parents From the Teachers' Standpoint." (c) "Syllabus for a Series of Mothers' Meetings," Mrs. C. E. Dickinson.

2. "Ethics in Our Schools," (a) "Object and Methods of Teaching Ethics in the Schools." (b) "Should Ethics be a Formal Study, with Text Book and Recitation?"

Kindergarten Section. 2 p. m.—Auditorium—

President of section, Wilhelmina Caldwell, superintendent of kindergartens, District No. 1, Denver.

Address—President W. F. Slocum, Colorado College, "Habits of Observation." General discussion.

Paper—Celia F. Osgood, Corona school, Denver, "The Kindergarten from the Standpoint of a Primary Teacher." Discussion—Mary F. Mack, Gilpin school, Denver; Margaret Grabill, director of the kindergarten department, Denver Normal and Preparatory school.

Paper—Mrs. C. E. Dickinson, Denver—"The Voice in the Kindergarten." General discussion.

Music for this section will be furnished by the students of the West Denver schools.

General Association. 7:45 a. m.—Auditorium—

President, A. B. Copeland, superintendent of schools, Greeley. Business meeting.

Lecture—Col. Francis W. Parker, principal Chicago normal school, subject, "The Ideal School."

Music will be furnished by the Apollo club, of Denver, Prof. Herbert Griggs, director.

Admission—Free to members of the association presenting association badge at the door.

Non-members, 50 cents.

Friday.

9.30 p. m.—Auditorium—

President's address, subject, "Report of the Committee of Twelve." General discussion.

Paper—Prof. M. I. Ellis, Ouray, "Drawing in Small Towns and Rural Districts." Discussion—J. F. Daniels, librarian State Normal school, Greeley; J. W. Robertson, superintendent of drawing, District No. 2, Denver.

2 p. m.—

Paper—Supt. John Dietrich, Colorado Springs, "The Tendency to Over-organization in Our School System." Discussion—Supt. O. J. Blakeslee, La Junta; County Superintendent Helen Grenfell, Gilpin county.

Paper—Supt. F. H. Clarke, Florence, "The Neglect of the Formal Side of Education." Discussion—Anna Olcovich, Emerson school, Denver; Dr. Arthur Allin, professor of philosophy and pedagogy, state university.

Music will be furnished by the Girls' quartette, high school, District No. 2, Denver.

**ACCREDITED HIGH SCHOOLS FOR ADMISSION TO THE
STATE UNIVERSITY.**

Denver high school, District No. 1; principal, W. H. Smiley.
Denver high school, District No. 2; principal, E. F. Hermanns.
Colorado Springs high school; principal, G. B. Turnbull.
Greeley high school; principal, A. J. Floyd.
Pueblo high school, District No. 1; principal, C. Aglard.
Pueblo high school, District No. 20; principal, Ida B. Halsup.
North Denver high school; principal, Edgar R. Downs.
Georgetown high school; principal, D. R. Hatch.
Canon City high school; principal, J. H. Allen.
Durango high school; principal, C. E. Chadsey.
Aspen high school; principal, F. J. Brownscombe.
Jarvis Hall Military Academy.
Ft. Collins high school; principal, A. H. Dunn.
Golden high school; principal, Wm. Triplett.
Grand Junction high school.
Trinidad high school; principal, R. M. Rolfe.
Cheyenne (Wyoming) high school; principal, J. O. Churchill.
College of the Southwest.
Central City high school; principal, M. F. Miller.

**LIST OF THE MEMBERS OF THE COLORADO STATE
TEACHERS' ASSOCIATION, 1896-1897.**

Arapahoe County--

Allen, Jennie, Highlands.
Arundel, E. G., Denver.
Arundel, Walter C., Denver.
Ayres, Henrietta B., Denver.
Barrett, H. M., Denver.
Barrows, B. W., Denver.
Bethel, E., Denver.
Bigelow, C. W., Denver.
Bird, T. B., Highlands.
Bliss, Sadie, Highlands.
Bradley, Charles A., Denver.
Brown, Helen M., Denver.
Burger, Charles R., Denver.
Butler, O. P. M., Denver.

Caldwell, Wilhelmina, Denver.
Campbell, Emma, Denver.
Cannon, Geo. L., Jr., Denver.
Carter, Charles M., Denver.
Clark, Ruth M., Denver.
Coffey, Gillian, Denver.
Collett, Alonzo M., Denver.
Coney, Clara J., Denver.
Cooper, Ellen M., Denver.
Cornell, L. S., Denver.
Courtney, A. C., Denver.
Crater, Mary, Denver.
Davidson, Eleanor, Denver.
Dewey, Lova C., Denver.
Dick, Fred, Denver.
Dickinson, Mrs. Charles E., Denver.
Dodds, J. H., Denver.
Downs, Edgar R., Denver.
Duvall, Lot M., Denver.
Eagleton, M. E., Littleton.
Eagleton, W. H., Villa Park.
Edwards, S. Essie, Denver.
Elder, Andrew W., Denver.
Ellison, J. W., Alcott.
Flower, Elizabeth, Denver.
Garvin, John B., Denver.
Gass, Delta M., Denver.
Gass, B. R., Denver.
Green, Miriam, Denver.
Green, Isabella, Denver.
Greenlee, L. C., Denver.
Griffith, Emily J., Denver.
Halam, Effie J., Denver.
Haskell, Annie N., Denver.
Haskell, Mary E., Denver.
Hays, C. I., Denver.
Helander, Amelia, Denver.
Hermanns, Ed. F., Denver.
Hinman, K. S., Denver.
Holloway, M. I., Denver.
Houran, Bird, Denver.
Howe, Herbert A., University Park.
Johns, T. Ada, Denver.
Johnson, S. Arthur, Denver.

Jones, Nora, Denver.
Kepner, H. V., Denver.
Klein, Louise, Denver.
Knapp, W. E., Denver.
Knudson, Caroline M., Denver.
Kram, Caroline V., Denver.
Ladd, Grace A., Denver.
Le Rosignol, J. E., University Park.
Lesler, Josephine K., Denver.
Ling, C. J., Denver.
Little, Clara L., Denver.
Long, George B., Denver.
McClure, Frances C., Denver.
McDowell, W. F., University Park.
McKay, Alice, Denver.
Mack, Mary, Denver.
Maclear, Jessie M., Denver.
Malone, Rose, Denver.
Maxwell, E. E., Denver.
Miles, Emily H., Denver.
Miller, A. N., Denver.
Mitchell, Alice S., Denver.
Moles, O. S., Denver.
Moore, Dora M., Denver.
Moore, James D., Hazeltine.
Morrison, Alice, Denver.
Mussey, William O., Denver.
Osgood, Celia, Denver.
Parks, W. T., Denver.
Pattison, P. K., Denver.
Patton, Grace Espy.
Philips, Homer S., Denver.
Philips, Julia, Denver.
Potter, C. A., Denver.
Post, Maude, Denver.
Ragan, J. B., Denver.
Rhoads, Thalia A., Denver.
Robinson, Katie K., Highlands.
Roosevelt, Giles Francis, Denver.
Russell, H. E., University Park.
Sale, Katherine E., Denver.
Salisbury, Celia A., Denver.
Scott, Jessie M., Denver.
Shattuck, Laura, Denver.

Shipman, S. T., Petersburg.
 Shumway, W., Denver.
 Sloan, Minnie E., Littleton.
 Smiley, W. H., Denver.
 Smith, Sidney F., Denver.
 Stillman, Genia H., Denver.
 Strickler, Mattie, Denver.
 Squier, Harriet, Denver.
 Stevens, J. C., Villa Park.
 Sutton, Isaac, Denver.
 Sylvester, Myrtie, Denver.
 Thompson, Alice M., Denver.
 Thompson, Lucy, Denver.
 Trehearne, Beatrice, Denver.
 Van Sickle, James H., Denver.
 Vaughn, Essie M., Denver.
 Ward, John J., Denver.
 Wedgewood, George S., Denver.
 Wheeler, Adda, Denver.
 Wilson, Ada C., Denver.
 Wise, W. J., Denver.
 Witter, M. A. B., Denver.
 Wyatt, G. W., Denver.
 Zirkle, H. W., Denver.

Bent County—

McCauley, George E., Las Animas.

Boulder County—

Brackett, J. Raymond, Boulder.
 Callahan, Henry White, Boulder.
 Casey, William V., Boulder.
 Clemens, Clara V., Boulder.
 De Long, Ira M., Boulder.
 Duncan, Mary W., Ward.
 Elder, E. Waite, Boulder.
 Fowler, Mrs. M. C., Boulder.
 Gardiner, John, Boulder.
 Harding, George L., Boulder.
 Kesner, Edgar, Boulder.
 McLean, James A., Boulder.
 Martin, Mary Jeannette, Boulder.
 Mosley, Frank Y., Boulder.
 Murray, Edith, Longmont.
 Palmer, C. S., Boulder.

Putnam, Wesley W., Boulder.

Russell, James, Boulder.

Shoe, Grace E., Longmont.

Thomas, Cora M., Boulder.

Waggener, W. J., Boulder.

Wilson, A. M., Longmont.

Chaffee County—

Kilgore, John S., Buena Vista.

North, Paul M., Buena Vista.

Morrison, L. J., Granite.

Cheyenne County—

Brooks, Lulu A., Cheyenne Wells.

Tulles, J. W., Cheyenne Wells.

Walker, Ella O., Cheyenne Wells.

Clear Creek County—

Frazier, Addie E., Idaho Springs.

Hatch, D R., Georgetown.

Mann, Nellie L., Idaho Springs.

Reynolds, Ida E., Idaho Springs.

Conejos County—

Brunson, Carrie A., Alamosa.

Fynn, A. J., Alamosa

Givens, Wellington, Antonito.

Irvin, Geo. W., Sanford.

McDonald, Mary, Alamosa.

Delta County—

Harris, W. G., Delta.

New, Ella, Delta.

Douglas County—

Ball, Frank D., Castle Rock.

Eagle County—

Dilts, James, Eagle.

Ruland, Grant, Basalt.

El Paso County --

Ahlers, L. A. E., Colorado Springs.

Atkinson, Edith, Victor.

Beitel, J. H., Monument.

Bowlby, Georgiana, Victor.

Bybee, W. F., Colorado Springs.

Cajore, Florence, Colorado Springs.

Clark, Ernest R., Colorado Springs.
 Collins, O. E., Fountain.
 Craigue, Mrs. P. B., Cripple Creek.
 De Bolt, Etta, Colorado Springs.
 Dietrich, John, Colorado Springs.
 Dittety, M., Colorado Springs.
 Doudna, P. E., Colorado Springs.
 Fitzgerald, Mary E., Manitou.
 Gordon, Henry E., Colorado Springs.
 Grafton, L. B., Colorado Springs.
 Hudson, Cora E., Colorado Springs.
 Ingram, Martha A., Gillett.
 James, Virgie, Ramah.
 Kennedy, Madeline, Colorado Springs.
 Loud, Frank H., Colorado Springs.
 Palmer, Ezra W., Colorado City.
 Parsons, Edward S., Colorado Springs.
 Pearce, Stella, Cripple Creek.
 Slocum, William F., Colorado Springs.
 Strieby, William, Colorado Springs.
 Turnbull, G. B., Colorado Springs.
 Whittemore, Ira H., Victor.
 Wright, J. P., Victor.

Fremont County—

Dodd, Flora, Canon City.
 Glass, W. S., Canon City.
 Hunt, W. A., Canon City.
 Jackson, Rudolph, Rockvale.
 Morris, D. D., Williamsburgh.

Gilpin County—

Backus, May, Black Hawk.
 Day, Nellie R., Central City.
 Frey, Minnie, Central City.
 Grenfell, Helen L., Black Hawk.
 McLeod, Carrie F., Central City.
 Miller, M. F., Central City.
 Matthews, J. H., Black Hawk.
 Scheffler, Anna M., Central City.
 Snyder, E. R., Bald Mountain.

Gunnison County—

Keplinger, W. W., Gunnison.
 Logan, Mrs. S. M., Gunnison.

Huerfano County—

Creesy, Mrs. J. C., Walsenburg.

Jefferson County—

Arasmith, J. W., Golden.
Booton, Mary A., Golden.
Christensen, Dora, Buffalo Creek.
Shirber, J. H., Morrison.
Strickland, A. I., Morrison.
Triplett, William, Golden.

Kiowa County—

Liggett, Mrs. E. O., Sheridan Lake.

Lake County—

Cretney, Edith, Leadville.
Dollinger, Forest J., Leadville.
Jackson, J. P., Leadville.
Larson, Kate R., Leadville.
McDonough, T. G., Leadville.
McDonald, Flora J., Leadville.
Page, Anna K., Leadville.

Larimer County—

Barber, Harriet L., Fort Collins.
Barnes, Lula B., Loveland.
Black, Almeda, Fort Collins.
Dunn, A. H., Fort Collins.
Ellis, Alston, Fort Collins.
Hobson, M. G., Loveland.
Jackson, O. E., Berthoud.
Miller, E. A., Timnath.
Parker, Charles V., Fort Collins.
Shull, Grace, Berthoud.
Smith, Mrs. L. M., Loveland.
Turner, Susie S., Berthoud.
Wilson, Henrietta, Fort Collins.
Working, D. W., Fort Collins.

Las Animas County—

Brown, Mary C., Trinidad.
Rhodes, Nelson, Jr., Trinidad.
Rolfe, Robert M., Trinidad.
Smethers, W. R., Trinidad.
Stevens, Eugene C., Trinidad.

Logan County—

Aiken, J. C., Sterling.

Mesa County—

Polley, May, Mesa.

Smith, Frank W., Grand Junction.

Mineral County—

Rote, L. J., Amethyst.

Montrose County—

Catlin, Alice M., Montrose.

Jones, Jennie, Montrose.

Morgan County—

Garver, Annie L., Fort Morgan.

Garver, William E., Fort Morgan.

Remington, W. W., Fort Morgan.

Otero County—

Beck, Maude G., La Junta.

Biggs, M. E., La Junta.

Blakesley, O. J., La Junta.

Park County—

Bell, John R., Alma.

Eagleton, J. S., Grant.

Maxcy, Sadie H., Fairplay.

Parsons, Richard, Como.

Pitkin County—

Brown, Tempie Waite, Aspen.

Browne, Anna, Aspen.

Brownscombe, F. J., Aspen.

Clark, F. H., Aspen.

Dickie, Alice, Aspen.

Palmer, C. F., Aspen.

Seymour, Blanche, Aspen.

Swanzey, Linah, Aspen.

Pueblo County—

Aylard, Carlton, Pueblo.

Bowman, C. W., Pueblo.

Cole, E. E., Pueblo.

Keating, J. F., Pueblo.

Muse, Alfonso W., Pueblo.

Scott, Izora, Pueblo.

Smith, Mary A., Pueblo.

Sogard, John, Pueblo.

Ward, Daniel, Pueblo.

White, Lulu, Pueblo.

Worden, Lillian, Pueblo.

Rio Grande County—

Wilson, H. H., Monte Vista.

San Miguel County—

Lay, H. C., Telluride.

McLoud, James, Telluride.

Sedgewick County—

Parker, C. F., Julesburg.

Summit County—

Jones, Jennie M., Breckenridge.

Washington County—

Sweet, Lucinda J., Akron.

Weld County—

Batterson, Charles, Erie.

Beardsley, A. E., Greeley.

Boyd, Psyche E., Greeley.

Boylan, M. Nora, Greeley.

Clark, Adele K., Greeley.

Coffey, Alice, Roggen.

Copeland, A. B., Greeley.

Cunningham, F. L., Fort Lupton.

Dexter, E. G., Greeley.

Fashbaugh, Carrie E., Evans.

Fenneman, N. M., Greeley.

Fitzgerald, Jennie, Fort Lupton.

Hamilton, Ida M., Greeley.

Hays, James H., Greeley.

House, E. B., Greeley.

Howard, O., Greeley.

King, L. C., Greeley.

Mumper, Anna Terry, Greeley.

Pine, J. M., Eaton.

Snyder, Z. X., Greeley.

Stanford, Ira E., Windsor.

Stockton, J. L., Greeley.

Tefft, L. E., Greeley.

Work, Cree T., Greeley.

Cagwin, D. C., Douglas, Wyo.
Garland, Minnie O., Cheyenne, Wyo.
Sherman, Alma A., Douglas, Wyo.

Life Members.

Baker, James H., Boulder.
Beggs, R. H., Denver.
Boyd, David, Greeley.
Gove, Aaron, Denver.
Hale, Horace M., Denver.
McClung, J. S., Pueblo.
Shattuck, J. C., Denver.
Smith, Nannie O., Denver.
Thomas, W. C., Longmont.

**CONSTITUTION AND BY-LAWS OF THE COLORADO
TEACHERS' ASSOCIATION.**

Adopted at the annual holiday session of 1892.

Committee on Revision—Ira M. DeLong, Boulder; S. T. Hamilton, Fort Collins; Joseph Shattuck, Denver.

The committee on a new constitution, Ira M. DeLong of Boulder, S. T. Hamilton of Fort Collins, and Joseph Shattuck of Denver, was appointed at the annual session of 1891. By order of the association, a preliminary report of this committee was published in the Colorado School Journal for July, 1892. The final report of the committee was submitted to the association at its annual meeting in 1892, and was by it amended and adopted as printed in the text appended.

Preamble and Constitution.

PREAMBLE.

We, the teachers of Colorado, for the purpose of increasing our efficiency, elevating our profession, and promoting every wise educational movement accessible to us, do ordain and establish this constitution for the Colorado Teachers' Association.

Constitution.

ARTICLE I. INCORPORATION AND NAME.

The teachers organized and acting under this constitution shall be incorporated as the Colorado Teachers' Association.

ARTICLE II. MEMBERSHIP.

1. Any teacher or friend of education shall, upon paying the stipulated dues, be entitled to receive a certificate of membership running from the date of payment.

2. Membership shall be:

(a) For one year, or for life, the former depending upon the payment of one dollar; the latter, upon the payment either of ten dollars in one sum, or of one dollar annually for fifteen years.

(b) Active, or associate, the former including all life members and such one-year members as are engaged in some distinctly educational work; the latter, all other members.

3. Associate members shall not be eligible to office; but, in speaking and voting, all members shall have equal rights, save that associate members may not vote on any particular question when an open objection thereto, made before taking up the next business in order, has been sustained by a majority of the active members present.

ARTICLE III. OFFICERS.

1. The officers shall be a president; as many vice presidents, and four times as many nominators as there may be sectional departments; a secretary, who shall (when feasible) reside in the place of meeting; a treasurer; three directors and three auditors.

2. Where not herein otherwise prescribed, an official year shall begin with the final adjournment of the electing session and end with that of the next regular session; but all officers shall hold over until their successors are duly qualified.

3. The president and vice presidents shall serve one year; the secretary and treasurer, three years; the directors and the auditors, three years (but so chosen at the first election that only one need retire each year thereafter); the nominators, during the session at which they are chosen.

4. The nominators shall consist of the nominators of the sectional departments, coöperating with an equal number chosen viva voce by the association, and it shall be their duty, sitting as a committee, the chairman of the directors presiding with right to speak and vote, and a majority being a quorum, to nominate all officers not otherwise provided for (giving due weight to fitness for the positions, sectional and geographical rotation, and seniority in membership) and report the same to the association in a business session held at least one half-day session before final adjournment. The adoption of this report as given or as amended shall complete their election.

5. It shall be the duty of the president to preside at all meetings, appoint committees not otherwise provided for; send and answer fraternal messages and greetings; time speakers with precision and fairness; fill inter-sessional vacancies not otherwise provided for, and call extra sessions, subject in both cases to the prior approval of the directors; and perform any other acts pertaining to his office.

6. The vice presidents shall consist of the chairmen of the sectional departments; and, when the president fails to serve, it shall be the duty of one of their number, in the order of personal seniority, to act in his place.

7. It shall be the duty of the secretary, with the aid of the reporter, to keep an accurate record of the proceedings, including all motions, discussions, resolutions and reports, publishing the same if the directors so order; collect and file all papers read before the association, and copies of all circulars, programmes and other official publications; keep the necrology of the association in a book for the purpose, reporting thereon annually to the association; act as secretary of the directors and of the educational council, keeping a concise record of their proceedings and reporting thereon annually; and perform any other acts pertaining to his office.

8. It shall be the duty of the treasurer to collect and hold all moneys due the association, paying out the same only on the written orders of the directors, attested by the secretary and accompanied by the itemized bills of the payees, filing such orders and bills, all duly receipted, as his vouchers to the auditors; make under classified heads an annual statement of the receipts and disbursements, starting with the cash balance named in the report of the auditors for the previous year; issue all certificates of membership, retaining a membership stub as a voucher to the auditors; collect the council fees and issue credentials therefor; furnish the secretary an alphabetical list of all members, giving their addresses, their official positions as teachers, and the sectional departments to which they belong; and perform any other acts pertaining to his office.

9. It shall be the duty of the directors, sitting as a committee, the senior official being chairman, and two being a quorum, to meet each year early in October, and at such other times as occasion may require, for the transaction of business as follows: To execute orders of the association; fix the time and place of meetings; prepare and publish the annual programme before the end of November; designate a suitable hotel for official headquarters; appoint annually a clerk of rates, and (if possible)

a reporter; limit the annual expenses to the funds on hand; fix the remuneration of the secretary and of the reporter, and pay the same after the year's work has been satisfactorily completed; require all claims for money to be in the form of fully itemized bills; draw all orders for the payment of approved bills; revise triennially the basis of sectional representation in the council; designate (subject to approval) annually prior to each regular session some standard school journal as the official organ for the ensuing year; reserve at all business sessions central seats in a body for the use of members; and perform any other acts which the interests of the association may require.

10. It shall be the duty of the auditors, sitting as a committee, the senior official being chairman, and two being a quorum, to make annually a faithful examination of the books, vouchers and membership stubs, submitting a written report thereon, engrossed in a book kept by the secretary for the purpose, setting forth the condition of the books, the accuracy of the accounts as checked by the vouchers, the cash balance with its place of deposit or investment, and any other items which in their judgment should come before the association.

11. It shall be the duty of the clerk of rates to arrange with the railroads and hotels for reduced rates to members, making written contracts when desirable, and providing for such identification as may be demanded; report all terms secured to the directors in time for insertion in the annual programme; and perform any other work appropriate to his office which the directors may prescribe.

12. It shall be the duty of the reporter to keep an accurate record of the extempore proceedings, with the names of the speakers, and to turn the same over to the secretary in legible long hand at the close of each session.

ARTICLE IV. DEPARTMENTS.

1. Upon a written petition, signed by twenty members identified with a special line of work in the state, permission may be given to organize and maintain a sectional department.

2. Subject to the government of the association, each department shall qualify its own members, and determine its rules of procedure; choose at the opening of its annual session two nominators to name (subject to amendment and approval) a chairman, a secretary, and the representatives in the council; make assessments for necessary expenses not otherwise provided for; and take any other action demanded by the special interests which it represents.

3. The chairman and the secretary of each department shall perform the duties suggested by their titles, and shall serve also as an executive committee for the preparation of the sectional programme, and for the performance of any other work connected with their department. Moreover, each secretary shall promptly file with the secretary of the association a copy of his minutes.

4. Not more than one-half day of each regular session shall be set apart for sectional meetings, and the special programmes for these meetings shall be printed in the annual programme of the association, provided that the committees in charge shall prepare and submit them to the directors prior to the middle of November.

5. During any one year, each department may, with the approval of the directors, draw upon the treasurer for an amount of money not exceeding (save with the prior consent of the association) one-fourth of the fees contributed by its members at the last regular session.

6. If any department shall, at any regular session, fail to meet for such deliberation and action as its special line of work may need, it shall thereby forfeit its organization, and can then be reorganized only by the original process.

ARTICLE V. THE EDUCATIONAL COUNCIL.

1. An educational council, composed of representatives of the sectional departments, on a ratio to be determined by the directors and revised by them every three years thereafter, may be organized by a two-thirds vote at any regular meeting of the association.

2. Representatives shall be chosen for three years (but so chosen at the first election that, as nearly as may be, one-third of the whole number may be chosen each year thereafter) from members in attendance who attended the previous year also; shall forfeit their council seats by absence from two successive sittings, unless excused for serious cause; shall pay to the treasurer of the association an annual council fee of two dollars, and receive from him their council credentials; and shall not be reimbursed for their expenses beyond an annual rebate of not more than one-half (as may be allowed by the directors) of their necessary outlay for a single railroad fare.

3. The Superintendent of Public Instruction, or the president of the association, shall be ex-officio the presiding officer of the council; and these two, coöperating with three representatives chosen by the council, shall act as its executive committee.

4. The educational council shall meet annually just prior to the opening day of the regular holiday session, and in the same place; and at other times and places upon its own adjournment, or upon the call of one of its presiding officers.

5. It shall be the duty of the educational council to report to the respective departments seats made vacant by absence or otherwise; consider all matters referred to it by the association; communicate with the directors respecting the work and welfare of the association; discuss advanced educational topics; propose educational reforms in legislation and in practice; stimulate and maintain a local interest in the National Educational Association, and coöperate in every practical way with the progressive educational forces of the state and country.

ARTICLE VI. MISCELLANEOUS PROVISIONS.

1. The regular sessions shall be held annually some time during the winter holidays, but extra sessions may be held at other times, provided that all officers shall be personally notified by mail or otherwise, and all other members by a prominent statement of the call in the leading dailies of at least four large cities within the state.

2. All papers are limited to twenty minutes, and shall, when read, be deposited with the secretary as the permanent property of the association. The leading discussions are limited to ten minutes each, and shall be presented in extempore form. All other discussions are limited to five minutes each.

3. A business session shall be held at least one half-day session before final adjournment for the following purposes:

- (1.) Reports of special committees.
- (2.) Petitions for sectional departments.
- (3.) Reports and election of officers.
- (4.) Instructions to incoming officers.
- (5.) Consideration of amendments.
- (6.) Any other appropriate business.

4. Voting shall ordinarily be done by acclamation; but a minority of one-third may demand a ballot; and a majority of all, the yeas and nays.

5. A majority may at any time enact by-laws in harmony with the constitution, and may in business session alter or suspend them. In open session a two-thirds standing vote shall be required for all changes.

6. This constitution shall be adopted in a business session by a three-fourths vote, and may at any regular session thereafter be amended in the same manner.

BY-LAWS.

1. Not more than three topics shall be assigned to any one session of the annual programme.

2. Speakers who are interrupted by the call of time, as also those who do not respond in their assigned order, may be allowed by the president to continue at the conclusion of the regular programme.

3. In the organization of departments, concise and expressive names shall be chosen—such names being in every case subject to the revision of the directors.

4. Parliamentary points not otherwise covered shall be settled by Roberts' Rules of Order.

ASSOCIATION OF COUNTY SUPERINTENDENTS OF SCHOOLS OF COLORADO.

The twelfth annual session Association of County Superintendents of Schools of Colorado was held at Colorado Springs, May 4, 5 and 6, 1897.

Officers and Committees—President, Hon. Angenette J. Peavey, Denver; vice president, Oliver Howard, Weld; secretary, J. W. Arasmith, Jefferson; treasurer, Edward M. Scanlan, Pitkin. Executive committee, Anna C. Willard, Elbert; James Dilts, Eagle; Frank D. Ball, Douglas.

SUBJECTS FOR ROUND TABLE DISCUSSION.

1. Uniformity in Text Books.
 2. Vertical Writing.
 3. How May the Superintendent Assist in the Selection of Teachers?
 4. How May Rapid and Accurate Number Work be Secured?
 5. What Can be Done to Elevate the Country School?
 6. The Eighth Grade Examination.
-

PROGRAMME.

Tuesday, May 4, 2:00 p. m.—

“Glad You’ve Come,” L. B. Grafton, El Paso.

“Glad You’re Glad,” President of association.

7:30 p. m.—

Lecture—The Genesis and End of Higher Education, Rev. W.

II. W. Boyle, Colorado Springs.

Wednesday, May 5, 10:00 a. m.—

Visit to schools of Colorado Springs.

2:00 p. m.—

Supplementary Reading and Literature in the Grades, Henrietta Wilson, Larimer. Discussion led by Alice M. Catlin, Montrose.

Essentials of an Education, J. W. Arasmith, Jefferson. Discussion led by Cuthbert F. Parker, Sedgwick.

8.00 p. m.—

Tales of Woe, superintendents in alphabetical order.

Thursday, May 6, 8:30 a. m.—

Scope and Aim of the Normal Institute, Thalia A. Rhoads, Arapahoe. Discussion led by John S. Kilgore, Chaffee.

Election of officers.

Miscellaneous business.

ASSOCIATION OF COUNTY SUPERINTENDENTS OF SCHOOLS OF COLORADO.

The thirteenth annual session of the Association of County Superintendents of Schools of Colorado was held in the State Normal School chapel, Greeley, May 3, 4, 5 and 6, 1898.

Officers of the association—President, Ex-Supt. C. W. Bowman, Pueblo county; secretary, Supt. H. C. Lay, San Miguel county; treasurer, Supt. Henrietta Wilson, Larimer county.

Executive Committee—Supt. Helen L. Grenfell, Gilpin county; Supt. W. E. Knapp, Arapahoe county; Supt. Frank D. Ball, Douglas county.

PROGRAMME.

Tuesday, May 3. Afternoon—

2:00—Music, Platonian glee club.

2:05—Address of welcome, Dr. Z. X. Snyder.

2:25—Response, president of the association.

2:35—Recitation, Miss Barber.

2:40—"Whence Should We Choose Our County Superintendents?" Supt. H. C. Lay, San Miguel.

3:00—Discussion.

3:20—"The Superintendent and the Children," Supt. Annie C. Willard, Elbert.

3:40—Discussion.

4:00—Music, school children of Greeley.

Evening—

8:00—Music, Teachers' glee club.

Round table discussion.

Wednesday, May 4. Morning—

9:30—Instrumental music, Miss Kendal.

9:35—"Teaching Among the Spanish-Americans in the Rural Districts of Southern Colorado," Supt. Michael Beshoar, Las Animas.

9:55—Discussion.

10:15—"What Should be Accomplished Through Our Normal Institutes?" Supt. Laura Pollock, Mineral.

10:35—Discussion.

10:55—Music, Junior glee club.

11:00—Report of reading circle work.

11:15—Round table discussion.

Wednesday, May 4. Afternoon—

2:00—Music, Junior glee club.

2:05—"County Associations: What Might and What Should be Accomplished Through Them," Supt. George L. Harding, Boulder.

2:20—Discussion.

2:40—"Desirable Amendments to the School Law," Supt. Frank D. Ball, Douglas.

3:00—Discussion.

3:25—Round table discussion.

3:55—Music, school children of Greeley.

Evening—

8:00 to 11:00—Reception, Dr. Z. N. Snyder.

Thursday, May 5. Morning—

9:30—Visit to the State Normal School.

Afternoon—

2:00—Music, Platonian glee club.

2:05—Address, "Some Duties of the County Superintendent," Supt. Warren E. Knapp, Arapahoe.

2:25—Discussion.

2:40—"Do Present School Methods Tend to Strengthen the Mind?" Supt. Lois J. Shepherd, Pueblo.

3:00—Discussion.

3:20—Business meeting.

3:55—Music, school children of Greeley.

Evening—

8:00—Music, school children of Greeley.

Lecture—"Sensory Training," Arthur Allin, Ph. D., professor of philosophy and pedagogy, State University.

Solo—Miss Boylan.

Friday, May 6. Morning—

Visit to public schools of Greeley.

The following circular letter was sent to each county superintendent of schools:

Castle Rock, Colo., October 22, 1898.

Superintendent.....

Dear

Shortly after the meeting of our state association last May, Supt. Grenfell of Gilpin county, Supt. Knapp of Arapahoe county, and myself met in Mr. Knapp's office to consider the advisability of attempting to secure some needed changes in our school law. Ex-State Supt. Peavey, representing the Federation of Woman's clubs, met with us and promised the coöperation of the organization she represented. In the light of previous experience it was thought wise not to ask for a great number of changes. United and concentrated effort directed toward a few desirable alterations was thought to be the course most likely to meet with success.

It was thought: First. That our present union high school law should be so amended as to give to the voters of third, fourth, and fifth-class counties the opportunity of determining whether or not such counties shall be organized each into one district for high school purposes; and, if so, to provide for the support of such high school by a tax on all the taxable property of the county not in excess of one mill on the dollar.

Secondly—That a law should be enacted requiring the payment of a fee of one dollar by applicants for certificates, renewals and endorsements, said fee to be turned into a general normal institute fund, which fund shall be divided equally among the thirteen normal institute districts of the state.

Thirdly—That some legislative check should be placed on the expenditure of school funds; and that this end can best be attained by making the county superintendent ex-officio auditor of school warrants, and forbidding the payment of a school warrant without his signature.

Your careful consideration of these propositions is solicited, and if they commend themselves to your judgment, your coöper-

ation in securing the suggested changes in, and additions to, the law. If each county superintendent will exert his influence to interest the representatives and senators from his county and district in these matters, securing pledges where possible before the legislature convenes (or even before election occurs), surely some, if not all, of the proposed changes will be effected.

Will you kindly submit to the undersigned your views in the matter?

Very truly yours,

FRANK D. BALL,

President County Superintendents' Association.

Miscellaneous Publications

**Recommendations of the Educational Committee of the
State Federation of Woman's Clubs of Colorado.**

The Colorado Library Association.

**Libraries: Their Establishment and Management.
Library Laws of Colorado.**

School-room Decoration.

Manual Training for Eight Years.

Art in the Kindergarten and Primary Grades.

RECOMMENDATIONS OF THE EDUCATIONAL COMMITTEE OF THE STATE FEDERATION OF WOMAN'S CLUBS OF COLORADO, AND REPORTS OF CLUBS.

The educational committee of the Colorado Federation of Women's Clubs made the following recommendations to the clubs of the state, at the annual meeting in October, 1897:

First—That this federation hold a meeting in connection with the State Teachers' Association, Thursday, December 30, 1897, and that the program be as follows:

MOTHERS' MEETING TOPICS.

- (a) Teachers' Ideas of Parents' Duties.
 - (b) Duties of Teachers from the Parents' Standpoint.
 - (c) Syllabus for Series of Mothers' Meetings.
 - (d) Reading of Letters.
-

ETHICS IN THE SCHOOLS.

- (a) Object and Methods of Teaching Ethics.
- (b) Shall Ethics be a Formal Study with Text Book and Recitation?

This program is designed to aid teachers and parents, in instituting parents' meetings in the different schools districts of the state, to the end that they may intelligently coöperate in the most important duty resting upon them, viz.: The rearing of the children, to become the parents of future generations and citizens of our republic. It is also hoped that the development of character, or the ethical side of the child's life will more and more become the central point around which all other training shall cluster, and to which it shall be subordinate.

Second—There is a large and constantly increasing number of children who have no homes, but are cared for by the state, and are gathered in institutions erected for their accommodation. This is well, but it is not all that is needed. Constant acquaintance with these institutions and supervision of them by the mothers of our state is the crying need of to-day. And the very presence of these dependent, helpless waifs of humanity should so appeal to the mother heart that nothing that pertains to their welfare would be overlooked. The care of each mother's child is the mother's business. So the care of these orphaned children is the business of the mothers of the state. It seems to your committee that the women of this state, federated in this association, might with great propriety concern themselves with the educational advantages offered to these children, and take care that advanced and approved methods and courses of instruction obtain in such institutions. And not only this, but that it be the supreme end to surround these unfortunates with influences tending to elevate them morally so that they may become worthy and happy citizens and be saved from reinforcing the ranks of the criminal and the worthless classes.

Third—That the women's clubs use their influence to place women on the school boards. In many places it has been done and the results are excellent. Women are better acquainted with the needs of children, and have more leisure than men to fulfill some of the duties of such positions, such as visiting the schools, becoming acquainted with teachers and obtaining knowledge of their methods and ability to teach, and last but not least, of their personal excellence. The arrangement of school houses and their belongings so that the health, convenience, comfort, and morals of the children may be best conserved is also a good field for women school directors.

Fourth—That this report be published as a leaflet, and that copies of "Suggestions for School Work," issued by the educational department of the Women's Club of Denver, be sent by the State Federation of all the federated clubs of Colorado and to all the presidents of the state federations.

SARAH S. PLATT, Chairman.

SUSAN R. ASHLEY,

IONE T. HANNA.

REPORT OF THE EDUCATIONAL COMMITTEE OF THE COLORADO FEDERATION OF WOMEN'S CLUBS.

In preparing this report the members of the committee feel that the material gathered is quite inadequate to the proper representation of the interest in, and work for the schools on the part of the clubs of the state. That there is much interest in the schools which is manifested by frequent visits to them, and by seeking the acquaintance and friendship of teachers, we cannot doubt.

That many clubs failed to send reports is partially due to the fact that the request for the reports was not made early enough in the year. We shall expect to have more complete reports for 1898.

Progressive and Excellent Features in School Work and Interest of Teachers and Parents.

Colorado Springs. Reported by Anne Hathaway Shakespeare Club. A symposium of mothers and teachers on the subject of "Reading in the Public Schools" was an occasion of much interest. There is much interesting art work. The enthusiastic and intelligent teachers do not expect every child to become an artist, but they do hope to form in each one the habit of striving for neatness, accuracy, and a certain artistic finish in every kind of work.

Denver. Reported by educational department of Woman's Club. Examinations dispensed with. Classes in geography and history and similar branches not confined to one text book. Recitations topical. Ethics as a regular branch of study. Speer system in four schools. Public kindergartens. Sloyd introduced in seventh and higher grades. Mothers' meetings for past two years in some schools, number increasing. Frequent visits of parents to schools. Educational topics current in all clubs. Teachers have a club. Several classes in pedagogy. New moves in educational circles discussed in large and small groups for study. Several teachers studying new methods in eastern cities at their own expense.

North Denver. Reported by North Denver Woman's Club. Introduction of sloyd in the lower grades. Typesetting and printing in the Ashland school. A well equipped gymnasium with specialist teacher and advantages for both girls and boys. A fine art department remarkably well equipped. The interest of the parents in the North Side schools is both general and in-

tense. On occasions when some unusual function or exhibition of work opens the buildings they are crowded.

Idaho Springs. Reported by Shakespeare Club. The methods used in school are those that have been found most successful, "but fads and experiments are not tried." Parents and public generally sustain and coöperate with teachers.

Leadville. Reported by Home Reading Club. Special attention should be called to the really admirable manner in which literature is taught in the lower grades—to the living, glowing creations which such tales as *Evangeline* and *Hiawatha* become.

Longmont. Reported by Fortnightly. A well equipped high school. A teachers' club meets with the school board monthly.

Ouray. Reported by Woman's Club. Excellent schools. Only one absence from high school in one year. The high degree of excellence is maintained by paying better salaries to the teachers than is common in towns of its size. Parents coöperate with the teachers cheerfully for the improvement of the schools, and one of the results is punctual attendance of pupils.

Pueblo. Reported by the Fortnightly. Sloyd introduced into schools the past year. Progress of pupils in music remarkable. Parents' meetings instituted. Two teachers' clubs formed, one for the study of Herbart's philosophy, one for child-study. In district No. 20 great interest in parents' meetings evinced by both parents and teachers.

Montrose. Cliolau Club. Citizens and children much interested in increasing the number of books in library.

Silvertown. Reported by Woman's Club. Little interest has been manifested by the majority of parents. Coöperation with teachers limited. Buildings and grounds in poor condition. Teachers not using modern methods.

Trinidad. Reported by Ladies' Tourist and Pierian Clubs. In proportion to the population we have the largest attendance in our public schools of any place in the state. Our graduates have entered Ann Arbor and other universities with honor. Teachers must be fitted by a normal course, a collegiate course, or three years actual experience. The course of instruction provides for seven years in the grades and four in the high school. Promotions are made whenever the pupils develop power sufficient to carry on profitably the work of a higher class. All the elements which appear in the sixth and seventh grades are introduced in the lower, because many children leave school before the grade work is completed. The plan used in teaching history is especially fine. A common sense combination of the individual and class recitation is followed at the discretion of the teacher.

On the occasion of any public demonstration friends and patrons rally most loyally, which attests to the interest felt. The fire-alarm drill is of especial interest.

Walsenburg. Saturday Club. The laws of health and the effects of alcohol upon the human system are taught in all the grades. Mothers manifest an increasing interest in the schools, visiting frequently. The fire drill is occasionally used.

Women as School Officials.

A large number of school districts have women on the school boards; among the larger districts are Nos. 1 and 17, Denver, Idaho Springs, Cripple Creek, and Ouray. Twenty-six of the county superintendents are women, and the state superintendent of instruction is a woman.

Sanitation and Convenience of Buildings.

All the clubs report favorably of the new buildings in their respective towns and all deprecate the existence of unfortunate conditions in old buildings, and evidently consider these will be tolerated only so long as is absolutely necessary.

Size and Condition of School Libraries.

In East Denver a large public library is freely used by pupils. In two of the grade schools are libraries numbering 1,000 volumes each. In others, smaller libraries are at the service of the pupils. In North Denver each grade is supplied with a good library. At the Webster school, located among foreigners of several different nationalities, a library has been put in circulation with very successful results. The condition of libraries is good and the books well chosen. Grand Junction has a library of 1,000 volumes; Idaho Springs, 600 volumes; Leadville, 1,450 volumes; Longmont, 600; Montrose, 400; Ouray, 255; Silverton, 300; Trinidad, 300; Walsenburg, 500 volumes.

The Twentieth Century and Grand Mesa Woman's Clubs, of Grand Junction; the Home Reading Club, of Leadville, and the Woman's Club of Ouray are engaged in the excellent work of founding and sustaining libraries for the use of their public schools.

Special Features of Educational Work.

The Wednesday Morning Club of Pueblo has had several lecture courses with admission fee, sufficient only to cover expenses.

Pueblo Monday Musical has procured the services of noted musicians in concerts, and last winter gave a series of free concerts.

The Norton Art Club contemplates placing books and pictures in the schools and public library.

In district No. 20, of Pueblo, known as Bessemer, a course of high school extension has been instituted, the object of which is to give advantages to young persons who have missed them, either through neglect or lack of opportunity. This work will be begun by a course of lectures on popular subjects, given in the town hall with the thought that an evening school may grow out of it.

The Woman's Guild, of the University of Denver, has for its field the giving of assistance to needy students and the advancement of higher education.

THE COLORADO LIBRARY ASSOCIATION.

The Colorado Library Association was organized December 20, 1892, for the purpose of stimulating library interests in this state, of promoting co-operation among librarians, and of aiding the American Library Association in promoting the modern library spirit.

It will, during the coming winter, as part of the year's work, urge the passage, by the state legislature, of a law creating a state library commission. The duty of this commission will be to encourage the establishment of libraries in cities and towns throughout the state; to supply information and advice to those wishing it in regard to the selecting, buying, cataloguing, and circulating of books; as well as in regard to other details of the proper working of a library. To this state library commission, if it is established, every library in the state which is supported wholly or in part by public funds will make an annual report, and the commission itself will report annually to the governor. The commission will take pains to spread information in regard to the present library laws of Colorado and what may and may not properly be done under them in the way of establishing and maintaining public and school libraries.

The Colorado Library Association holds regular monthly meetings on the second Friday of each month. The places of such meetings and the programmes for them are decided upon and announced in due season by the executive committee.

CONSTITUTION.

Article I. The name of this association shall be the Colorado Library Association.

Art. II. The objects of this association shall be to stimulate library interests in the state of Colorado, to promote co-operation

among library workers, and in every way possible to second the efforts of the American Library Association.

Art. III. Any person engaged in library work or in any way interested in the aims of this association may become a member by paying the annual membership fee.

Art. IV. The officers of this association shall be a president, three vice-presidents, a secretary, and a treasurer.

These officers shall be elected annually at the November meeting of the association, and shall constitute the executive committee, which shall have power to act for the association during the intervals between its meetings; but shall not have power to incur debt beyond the amount of money actually in the treasury.

Art. V. The president shall preside at all meetings of the association; in his absence a vice-president shall preside.

Sec. 2. The secretary shall notify members of all meetings at least four days before they are held, and shall prepare and carefully preserve a record of the proceedings of the association.

Sec. 3. The treasurer shall have charge of the funds of the association, keep a correct account of its financial affairs and submit a written report of the same at the November meeting.

Art. VI. This constitution may be amended at any meeting of the association by a two-thirds vote of the members present, provided the proposed amendment shall have been submitted in writing at a previous regular meeting.

BY-LAWS.

Article I. The annual membership fee of this association shall be one dollar, due at the time of joining. At the expiration of twelve months from the payment of the annual fee by any member, membership shall cease. The secretary shall send to all members notices of such expiration at least thirty days before the date thereof.

Art. II. This association shall hold eight regular meetings in each year, which meetings shall occur on the second Friday in each month, commencing with October. The executive committee may call a special meeting at any time. The president shall call a special meeting upon the written request of five members.

Art. III. Five members of this association shall constitute a quorum for the transaction of business.

Office of the Superintendent of Public Instruction.

Denver, Colorado, May 15, 1897.

To the Secretary of the School District:

The department of public instruction desires to collect statistics concerning the libraries now being maintained in the state. Please answer the following questions, making your replies as comprehensive as possible.

GRACE ESPY PATTON,
Superintendent of Public Instruction.

Town.....County.....School District No.....
Are there any libraries in the schools of your district?.....
How many?.....Number of volumes in each.....
Total number of volumes in district.....
Are the books used exclusively for reference books?.....
Are the books lent to the pupils?.....
Are the books lent to others in the district.....
Do the pupils have free access to shelves?.....
Is the use of the library encouraged by the teachers?.....
To what extent do pupils use the library?.....
Is there a public library in your town?.....
How many volumes in the public library?.....
Are there other libraries in the town?.....
Do pupils borrow many books from the public or other li-
braries?.....
How are the libraries supported?.....
Would the members of the school board of your district favor
buying more books if they were furnished proper information
regarding the maintenance of libraries?.....
Are there any other remarks or suggestions you wish to make?..
.....
Does your district provide free text books?.....
How are the books taken care of during vacation?.....
.....

LIBRARIES: THEIR ESTABLISHMENT AND MANAGEMENT—LIBRARY LAWS OF COLORADO.

Issued by Grace Espy Patton, Superintendent of Public Instruction and ex-officio State Librarian, Denver, Colorado, October 10, 1897.

Grace Espy Patton, Superintendent of Public Instruction and ex-officio State Librarian.

Mary Holland Kinkaid, Assistant Superintendent.

Hattie E. Stevenson, Assistant Librarian.

Ella Briggs Hosick, Clerk.



Libraries having been recognized as a necessary part of the regular equipment provided for every efficient school, the publication of a pamphlet containing the library laws and timely suggestions regarding the work of collecting books, becomes a pleasant duty devolving upon the Superintendent of Public Instruction of Colorado.

Colorado is foremost in the establishment and maintenance of public schools that are kept up to the highest educational standards. In connection with the development of these schools, there has awakened an enthusiastic interest in libraries. The cities of Colorado are the fortunate possessors of thousands of volumes of good literature, but the cities do not monopolize all the libraries. There are fifteen hundred school districts in the state, and from statistics recently gathered by the department of public instruction, it is fair to estimate that at least one-quarter of the districts have the nucleus of a public library. Answers to inquiries sent out at the end of the last school year show that all the districts are ambitious to own instructive and entertaining books.

The contents of this bulletin will certainly prove helpful to citizens of every county, and it is hoped that hundreds will take

advantage of the valuable hints from experienced librarians who have kindly lent assistance in the preparation of these pages.

Part of the text was printed in the April number of The Colorado School Journal. Articles not signed were written or compiled by J. C. Dana, librarian of the Denver public library.

The Library Laws were compiled by George M. Lee of the Denver public library.

GRACE ESPY PATTON,

Superintendent of Public Instruction.

Denver, Colorado, October 10, 1897.

LIBRARY LAWS OF COLORADO.

COMPILED BY GEORGE M. LEE, PUBLIC LIBRARY, DENVER.

Public libraries are exempt from taxation. Section 3766. Constitution Colorado, article X., section 4. Mills, 439.

The qualified electors of any district of the third class, when assembled at any regular or special meeting, shall have power to order such tax on taxable property of the district as the meeting shall deem sufficient for the * * * procuring libraries * * * for the schools. Mills, 4027.

The board of any district may order the levy of not to exceed one-tenth of one mill, the proceeds of which shall be used exclusively in the purchase of books for a library, to be open to the public, under such rules as the district board may deem needful for the proper care of the said library. Mills, 4032.

The establishment and maintenance of a free public library is hereby declared to be a proper and legitimate object of municipal expenditure; and the council or trustees of any city or incorporated town may appropriate money for the formation and maintenance of such a library, open to the free use of all of its inhabitants, under proper regulation; and for the purchase of land and the erection of buildings, or for the hiring of buildings or rooms suitable for that purpose, and for the compensation of the necessary employees; Provided, That the amount appropriated in any one year for the maintenance of such a library shall not exceed one mill upon the dollar upon the assessed valuation of such city or town. Any such city or incorporated town may receive, hold or dispose of any and all gifts, donations, devises and bequests that may be made to any such city or incorporated town, for the purpose of establishing, increasing or improving any such public library; and the city or town council thereof may apply the use, profit, proceeds, interest, and rents accruing therefrom in such manner as will best promote the prosperity and utility of such library. Every city or incor-

porated town in which such a library shall be maintained shall be entitled to receive a copy of the laws, journals, and all other books published by the authority of the state after the establishment of such a library, for the use of such library, and the secretary of state is hereby authorized and required to furnish the same from year to year to such city or incorporated town. But no appropriation of money can be made under this section unless the proposition is submitted to a vote of the people at a municipal election of such city or town, in such manner as may be prescribed by ordinance. Mills, 4403, paragraph 76.

The clear proceeds for all fines for any breach of any penal ordinance of any city in this state, and for penalties or upon any recognizance in criminal proceedings, may be exclusively applied to the establishment and support of public libraries as hereinbefore provided. Mills, 2815.

Each member of such library committee shall perform his duties without compensation, and shall before entering upon his duties, give bond to be approved by the mayor of such city, in the sum of five hundred dollars, conditional for the faithful performance of his duties. Mills, 2819.

Such committee and their successors shall have the power to sue and be sued, in the name of the library committee of the city in which they are appointed, in all matters relating to such library or library fund. Mills, 2820.

That the common council or board of trustees of any city or town in this state are hereby authorized, if they shall see fit, to apply any part of the fund referred to in section one (Mills, 2815) in aid of any library association organized for the benefit of the public, heretofore or hereafter established; Provided, Such library association will give to the common council or board of trustees such representation upon its board of management as may be requested. Mills, 2821.

That the state librarian be, and he is hereby, directed to turn over to the librarian of any free public library in this state, if desired for public use therein, and take the receipt of such librarian therefor, one copy of each and every such book, pamphlet or periodical published by this state as can be spared, now on hand, or which shall be published by the state from time to time hereinafter. Mills, 2822.

That the city council of each incorporated city shall have the power to establish and maintain a public library and reading room for the use and benefit of the inhabitants of such city and may levy a tax of not to exceed one mill on the dollar annually, and in cities of over one hundred thousand inhabitants, not to

exceed one-half of a mill on a dollar annually on all the taxable property in the city; such tax to be levied and collected in like manner with the general taxes of said city and to be known as the "Library Fund." Session Laws, 1893, chapter 115, section 1.

When any city council shall have decided to establish and maintain a public library and reading room, under this act, the mayor of such city shall, with the approval of the city council, proceed to appoint six persons, who, with the mayor of such city, shall constitute a board of directors for the same, the said six persons to be chosen from the citizens at large with reference to their fitness for such office; and not more than one member of the city council shall be at any one time a member of the board. Session Laws, 1893, chapter 115, section 2.

Said directors appointed by the mayor shall hold office one-half for one year and one-half for two years from the first of July following their appointment, and at their first regular meeting shall cast lots for the respective terms; and annually thereafter the mayor shall before the first day of July of each year, appoint as before three directors to take the place of the retiring directors, who shall hold office for two years and until their successors are appointed. The mayor may, by and with the consent of the city council, remove any director for misconduct or neglect of duty. Session Laws, 1893, chapter 115, section 3.

Vacancies in the board of directors, occasioned by removals, resignations, or otherwise, shall be reported to the city council and be filled in like manner as original appointments, and no director shall receive compensation as such. Session Laws, 1893, chapter 115, section 4.

The mayor of said city shall be the president of said board and the said board shall have the power to elect such other officers as they may deem necessary. They shall make and adopt such by-laws, rules and regulations for their own guidance and for the government of the library and reading room as may be expedient, not inconsistent with this act. They shall have the exclusive control of the expenditure of all money collected to the credit of the library fund and of the construction of any library building, and of supervision, care and custody of the grounds, rooms or buildings, constructed, leased, or set apart for that purpose; Provided, That all moneys received for such libraries shall be deposited in the treasury of said city to the credit of the library fund and shall be kept separate and apart from other moneys of such city, and drawn upon by the proper officers of said city upon the proper authenticated vouchers of the library board. Said board shall have the power to purchase or lease grounds, to oc-

copy, lease or erect an appropriate building or buildings for the use of said library. Shall have power to appoint a suitable librarian and necessary assistants, and fix their compensation, and shall also have power to remove such appointees; and shall in general, carry out the spirit and intent of this act in establishing and maintaining a public library and reading room. Session Laws, 1893, chapter 115, section 5.

Every library and reading room established under this act, shall be forever free to the use of the inhabitants of the city where located, always subject to such reasonable rules and regulations as the library board may adopt in order to render the use of said library and reading room of the greatest benefit to the greatest number; and said board may exclude from the use of said library and reading room any and all persons who shall wilfully violate such rules. And said board may extend the privileges and use of such library and reading room to persons residing outside of such city in this state, upon such terms and conditions as said board may from time to time by its regulations prescribe. Session Laws, 1893, chapter 115, section 6.

The said board of directors shall make, on or before the second Monday in March, an annual report to the city council, stating the condition of their trust on the first day of March of that year, the various sums of money received from the library fund and from other sources, and how such moneys have been expended, and for what purposes; the number of books and periodicals on hand, the number added by purchase, gift or otherwise during the year; the number of visitors attending, the number of books loaned out, and the general character and kind of such books; with such statistics, information, and suggestions as they may deem of general interest. All such portions of said report as relate to the receipt and expenditure of money, as well as the number of books on hand, books lost or missing, and books purchased, shall be verified by affidavit. Session Laws, 1893, chapter 115, section 7.

The city council of said city shall have power to pass ordinances imposing suitable penalties for the punishment of persons committing injury upon such library or grounds or other property thereof, or for injury or failure to return any book belonging to such library. Session Laws, 1893, chapter 115, section 8.

Any person desiring to make donations of money, personal property, real estate for the benefit of such library, shall have the right to vest the title to the money or real estate so donated in the board of directors created under this act, to be held and con-

trolled by such board, when accepted according to the terms of the deed, gift, devise or bequest of such property; and as to such property the said board shall be held and considered to be special trustees. Session Laws, 1893, chapter 115, section 9.

When fifty legal voters of any incorporated town, shall present a petition to the clerk of the town, asking that an annual tax may be levied for the establishment and maintenance of a free public library in such town, and shall specify in their petition a rate of taxation not to exceed two mills on a dollar, such clerk shall in the next legal notice of the regular annual election in such town, give notice that at such election every elector may vote "For a .. mill tax, for a free public library," or "Against a .. mill tax for a free public library." specifying in such notice the rate of taxation mentioned in said petition; and if the majority of all the votes cast in the town shall be "For the tax for the free public library." the tax specified in such notice shall be levied and collected in like manner with the other general taxes of said town and shall be known as the "Library Fund;" Provided, That such tax shall cease in case the legal voters of any such town shall so determine by a majority vote, at any annual election held therein; and the corporate authorities of such towns may exercise the same power conferred upon the corporate authorities of cities under this act. Session Laws, 1893, chapter 115, section 10.

At the next regular election after any town shall have voted to establish a free public library, there shall be elected a library board of six directors, one-half for one year, one-half for two years, and annually thereafter there shall be elected three directors who shall hold their office for two years and until their successors are elected and qualified; which shall have the same powers as are by this act conferred upon the board of directors of free public libraries in cities. Session Laws, 1893, chapter 115, section 11.

That whenever any library association organized under the laws of the state or not, and owning any real or personal property in this state, shall desire to sell or lease the same, or any part thereof, absolutely or with conditions, to the board of directors of any free public library, organized under the laws of this state, which sale or lease may be made in manner following, viz.: The directors of such association shall call a meeting of all the members, subscribers or stockholders thereof, to be held at the rooms of said library or office of the secretary of such association: written or printed notice of the time, place and object of such meeting and of the terms and conditions of the proposed sale or lease being first mailed at least thirty (30) days prior to the time

of such meeting, to the address of each member, subscriber or stockholder whose place of residence is known to any of the officers or directors of such association, and by publishing such notice for at least thirty (30) consecutive (consecutive) days preceding the time of such meeting in some newspaper published and of general circulation in the county where the property of said association is situate. Session Laws, 1893, chapter 115, section 12.

If the members, subscribers or stockholders representing the majority in the amount of the stock of such association, shall vote, at such meeting in favor of such sale, or lease, upon the terms or conditions specified in such notice, or, in case such association shall consist of two or more departments, if a majority of the members, subscribers or stockholders of each department shall vote at such meeting in favor of such sale or lease so specified, then the president and secretary shall cause a record of the proceedings of such meeting verified by the oath of the president thereof, together with an affidavit of the service of publication of notice herein required, to be filed in the office of the clerk and recorder of the county where the property of such association is situate; after which the president and secretary of such association shall be and are hereby authorized and empowered to execute any and all necessary deeds, leases, bills of sale, or other instrument in writing, to carry out the object and intent of said vote, which, when duly executed, shall be sufficient to pass to the board of directors of such free public library all the legal and equitable title of said associations, in and to the real or personal property in said instrument described as therein set forth. Session Laws, 1893, chapter 115, section 13.

COLORADO LIBRARY LAW.*

BY JOHN PARSONS, PUBLIC LIBRARY, DENVER.

The library law of Colorado is not in a satisfactory condition. It is comprised in various statutes and parts of statutes, which often duplicate one another and sometimes seem inconsistent. The following is a statement of what seems practicable in library matters under present conditions:

(1) The qualified electors of any school district of the third class, when assembled at any regular or special meeting, may order a sufficient levy on all the taxable property of the district to procure libraries for the schools.

*Colorado School Journal, April, 1897.

(2) The council or trustees of any city or town may, if they see fit, apply any part of the clear proceeds of certain fines in aid of any library association for the benefit of the public; Provided. That such library association give the council or trustees such representation in its board of management as the council or trustees may ask.

(3) The trustees of any city or incorporated town may appropriate money for a public library, if at a previous election a majority of the people have voted in favor of such action. Such appropriation shall not exceed one mill upon the dollar.

(4) If fifty legal voters of any incorporated town present a petition asking that an annual tax be levied to establish and maintain a free public library, and a majority of the legal voters vote in favor of such action at the next annual election, the tax mentioned in the petition shall be collected and known as the "library fund." Such tax shall cease whenever the majority of legal voters so determine.

(5) The city council of any incorporated city may establish and maintain a public library and reading room and may levy a tax for such purpose of not more than one mill on the dollar annually. In cities of more than one hundred thousand inhabitants this tax is not to exceed one-half of one mill on the dollar annually.

(6) In any city or incorporated town the clear proceeds of certain fines and penalties may be applied to the establishment and support of a public library.

It is clear from the above that at the present time there are two ways of establishing libraries in Colorado. The town or city government, without a vote of the people, can use certain fines and penalties either to aid a library association already existing, if the association will make the library accessible to the public, or to establish and maintain a library of its own. The town or city government may again take the initiative and by obtaining a vote of the town or city, may obtain authority to levy a tax to establish and maintain a library. Or, in the case of an incorporated town, fifty legal voters, who feel the need of such an institution, may take the initiative and petition the town government to submit the question to the qualified electors, and then, if a majority of the qualified voters vote in favor of such levy, the tax must be collected until a majority of the voters determine otherwise.

BY GEORGE M. LEE, PUBLIC LIBRARY, DENVER.

There are not many public libraries or school libraries in the state of Colorado; not many people in the state have had experience in starting such libraries or working up public sentiment in favor of them, organizing them or running them. Few people in the state, even among those who are thinking of starting a library, are familiar with Colorado library laws or what tax can be levied for library purposes. The few well-known librarians in the state receive a great many inquiries from towns, villages and country school districts, about how to organize a library, where and how best to buy books.

Is it desirable to have a public library in every town and school district in the state of Colorado?

Is it desirable to have traveling libraries in the state of Colorado?

Is it desirable to have these libraries managed as economically as possible? The books well selected? The libraries maintained for the benefit of the greatest number?

If you answer these questions in the negative, the discussion is at an end. But we assume that you will answer them in the affirmative. The question now arises, how can we best secure these several things?

The Colorado State Library Association, composed of active librarians and persons interested in libraries, has given these questions careful consideration. It has examined them from every standpoint. It has studied the methods pursued in other states. It has come to the opinion that libraries are the best, are most economically managed, and are maintained at the highest standard in those states in which there are library commissions or boards of a similar nature.

In proposing any legislation relative to the establishment and maintenance of public libraries, it is well to consider carefully to what extent the state should encourage the work.

In this state there are no compulsory laws regarding the establishment or maintenance of any library. The laws permitting the establishment of public, city, town, or school libraries, are very liberal, indeed. This is as it should be.

In the past the opinion seems to have been that where a law was enacted, permitting the establishment of a library, the whole duty of the state had been performed. In this we do not agree.

We ask—and we believe that what we ask is for the best interests of the state at large—that a state library commission be established. This commission would have a general oversight over all the public or semi-public libraries in the state. To it all libraries would make annual reports. By giving this commission general oversight of all books purchased with public money, it would prevent their becoming scattered or lost, as is now the case in many places.

School-boards and teachers are changing constantly; so also are county and state superintendents. Those coming in are not familiar with the work of their predecessors. Especially is this true in regard to books. It is a fact that in many school districts of this state considerable sums have been spent for books for a library; but because of improper supervision these have been scattered and lost. More books have thus been lost than are now owned by these districts. These statements are also true of many Eastern states which have now established library commissions.

We believe in the public schools. We also believe that since the average child leaves the public school at twelve years of age, the best and almost the only way to continue the education of the average citizen beyond his twelfth year is by the establishment of public libraries. In the boys and girls of our state rests its future. If they are taught the use of books before they leave school, they will continue to use them after they leave school. This will increase their usefulness to the community in which they live, and will make of them better citizens.

The few large libraries in the state are taxed to their utmost to meet the ordinary demands made upon them. It is impossible for them to meet the many calls from the smaller places, both in regard to books and in regard to information about the starting and maintenance of libraries.

If this demand for library information and advice is met—and we believe that it should be—it must be by giving practical and intelligent oversight.

The library movement has advanced in this state. It will continue to advance. Why not give it proper direction at the beginning? Proper direction can come only through a library commission.

It can guide the work along practical and economical lines. This will result in the building up in the state, at first cost, a system of libraries that will be a credit to the state and will advance its educational interests.

The bill, as introduced in the legislature, calls for an appropriation of \$1,000 a year. The appropriation is not at present the most important thing; it is believed that a commission of five people interested in libraries and knowing about the subjects mentioned above, can very greatly help the library side of the educational work of the state by making itself a distributing point for library information of all kinds. It is asked only that the library movement receive at the hand of this legislature such a recognition by the passage of the bill as it believes it deserves. If it does not aid the library movement in the state, and so the whole educational movement in the state, during the next two years, it will be very easy to legislate it out of existence in 1899.

COLORADO LIBRARIES.*

In response to a circular sent out by me a few weeks ago, asking for information about Colorado libraries for this Library Number of the Journal, the following replies have been received:

J. C. DANA.

THE STATE LIBRARY.

The Capitol, Denver. Founded in 1861; volumes, 15,000, including pamphlets; Grace Espy Patton, ex-officio state librarian; Hattie E. Stevenson, assistant librarian; established by the territorial legislature of 1861; maintained from contingent fund allowed the superintendent of public instruction.

The library is very much in need of an appropriation to be expended in proper cataloguing, in supplying missing numbers of state reports, and putting the library in such shape that the material already there may be of use to the people of the state.

COLORADO LIBRARY ASSOCIATION.

BY CHARLOTTE A. BAKER, PUBLIC LIBRARY, DENVER.

The Colorado Library Association, organized December, 1892, is an association of people interested in libraries and the promotion of libraries in Colorado. It holds meetings once a month through the winter for the discussion of library matters and of allied literary and educational subjects. Any person interested in education and the promotion of libraries in Colorado is cordially invited to become a member of the association. Similar

*Colorado School Journal, April, 1897.

associations in many other states have had a very beneficial effect in promoting the establishment and efficiency of public libraries. The annual membership fee is one dollar.

The present officers of the association are:

President, A. E. Whitaker, librarian State University, Boulder; vice presidents, Miss Charlotte A. Baker, Public Library, Denver; Jos. F. Daniels, librarian State Normal School, Greeley; Herman G. A. Brauer, librarian Coburn Library, Colorado Springs; secretary, H. E. Richie, City Library, Denver.

This year the aim of the association has been to give information to the younger librarians and to hold occasional meetings at points where it seems well to call public attention to library matters or to the establishing of a public library. The make-up of a book, its typography, illustration, binding, etc., the arrangement of a building suited for library work, children's reading, etc., have been talked over at different meetings; and later, book selecting, buying, cataloguing, etc., will be discussed from an elementary point of view.

At the beginning of the winter it was planned to have three out-of-town meetings. Two have been held—one at Colorado Springs, and one at Boulder; the third will be held at Greeley, in May. At Colorado Springs, Mrs. Peavey, then state superintendent of public instruction, gave some very interesting information about the condition of the school libraries in the state; and Mr. Dana of Denver gave some practical suggestions about a plan for a library building.

Certain Boulder citizens, through the meeting of the Colorado Library Association there, laid their first plans for a public library for their town. A committee was appointed to see what could be done, and was ordered to report at a public meeting to be called some time within a year.

In May the association meets at Greeley. That is to be the trip of the year, when it is hoped to have a pleasant outing, as well as to do good work. With Mr. Daniels of the Normal School Library as host, it will be an enjoyable occasion.

The special work of the association this winter has been and is the passage of the bill for a library commission, now before the legislature.

It is hoped that the teachers of the state will, through the association's efforts, increase their interest in library work. It falls to the libraries to finish the work, if it is finished, that the schools have so well begun. If the libraries meet this need intelligently it must be through the patient help and coöperation of the schools.

BUYING BOOKS.

A good book for a library, speaking of the book as to its wearing qualities and as to the comfort of its users, is printed on paper which is thin and pliable, but tough and opaque. Its type is not necessarily large, but is clear-cut and uniform, and set forth with ink that is black, not muddy. It is well bound, the book opening easily at any point. The threads in the back are strong and generously put in. The strings or tapes onto which it is sewn are stout, and are laced into the inside edges of the covers, or are long enough to admit of a secure fastening with paste and paper. In ordering books of which several editions are on the market, specify the edition you wish.

In giving your orders, always try your local dealer first. If he can not give you good terms, submit a copy of the list to several large book dealers, choosing those nearest your town, and ask for their discounts. Keep a record of all books ordered. The best form of record is on slips, using a separate slip for each book. A library should secure from twenty-five to thirty-five per cent. discount. Do not buy ordinary subscription books or books on the installment plan. Buy good, but not expensive, editions. Do not spend on a single costly work, of interest to a few and seldom used by that few, a sum that would buy twenty or perhaps one hundred volumes that would be constantly and profitably used by many. Buy no book, unless you know by personal acquaintance, or upon competent and trustworthy testimony, that it is worth adding to your library. Do not feel that you must buy complete sets of an author; all the works of very few authors are worth having. Books for young people must be interesting. No amount of excellence in other directions will compensate for dull books. Do not trust too much to the second-hand dealer; his wares are often defective. Do not buy of a book peddler; in nine cases out of ten you can find better and cheaper books at the stores. A well selected and judiciously purchased library, with such works of reference as are needed, will cost, on an average, \$1.25 a volume.

A FEW DETAILS OF LIBRARY WORK.

ACCESSIONING BOOKS.

A careful record should be made of all books received. Use for this purpose what is called an accession book. This is a blank book, ruled and lettered and numbered especially for library invoices. It is the library's chief record, and should contain a complete history of every volume on the shelves. Each volume of a set should have a separate accession number and a separate entry. Each entry occupies a line; each line is numbered from one up to such number as the library has volumes. The number of each line, called the accession number, is written on the back of the title page of the book described on that line. The accession book is a life history of every book in the library. It forms such a record as any business-like person would wish to have of property entrusted to his care. It is also a catalogue of all books in the library, and a useful catalogue as long as the library is small. Record should be made of all books, pamphlets, reports, bulletins, magazines, etc., received by the library as gifts.

CLASSIFYING.

The smallest public library should be classified and catalogued. This will make its resources available, and will prevent the confusion and waste of labor which are sure to come if systematic treatment of the books is deferred. Get the best advice obtainable; consider the library's field and its possibilities of growth, and let the first work on the books be such as will never need to be done over.

To classify books is to place them in groups, each group including, as nearly as may be, all the books treating of a given

subject—for instance, geology; or all the books, on whatever subject, cast in a particular form—for instance poetry; or all the books having to do with a particular period of time—for instance, the Middle Ages. Few books are devoted exclusively to one subject and belong absolutely to any one class. The classification of books must be a continual compromise. Its purpose is not accurately to classify all knowledge—this can't be done; but simply to make the sources of information—books—more available. Any classification, if it gets the books on a given subject side by side, and those on allied subjects near one another, is a good one.

Books may be classified into groups in a catalogue or list, yet themselves stand without order on the shelves. For convenience in getting for anyone all the books on a given subject, and especially for the help of those who are permitted to visit the shelves, all books should stand together in their appropriate classes. Each book, therefore, should bear a mark which will tell in what class it belongs; distinguish it from all other books in that class; show where it stands on the shelves among its fellows of the same class, and indicate which one it is of several possible copies of the same book. This mark can be used to designate the book in all records of it, instead of the larger entry of its author and title.

There are many classification systems, with just as many different class-marks, or notations. Most of these systems can easily be adapted to a small library. Choose one in common use, that you may take advantage of the work of others in classifying your library. Don't try to devise a system of your own or to adopt or modify another's.

CATALOGUING.

A catalogue is a labor-saving device in library work. From it both reader and attendant can ascertain whether the library owns a certain book. By consulting the catalogue for the class number, the book may be looked for in its proper place, thus often saving hunting through the shelves in several classes.

On cards prepared for the purpose, a card for each book—and a book is a book, although in several volumes—write the author's surname, given name if known, title, date of copyright, date of publication, call-number, and such other data as seem desirable. Arrange these cards alphabetically by authors' names for an author catalogue. This catalogue will be in constant use

in the purchasing of books, in classifying new purchases, etc. Preserve this catalogue with great care. It is the key to the records in shelf-list and accession book. In a small library careful patrons very properly use it. The average reader more often remembers the titles of books than their authors. Add to the author-list a title-list; a set of cards like the author cards, except that on each one the book's title is entered first instead of its author. Arrange the author and title-lists in one alphabetical series.

As the use of the library for reference work increases, the question will often be asked, has it any books on a certain subject? Add to your author and title-list a subject-list. Make this by writing a card for each book with the subject of which it treats the first word upon it. Arrange this also in the same alphabetical series with the other two.

PREPARING BOOKS FOR THE SHELVES.

All books should be marked with the name of the library. This is generally done with a rubber stamp and violet or red ink pad. An embossing stamp makes a good and indelible mark. Type should be of moderate size and open faced. Mark books freely, to assure their being recognized as the library's property wherever seen. On the back of the book write the call-number. For this purpose use a tag or label. These can be had in several sizes. Paste the label where it will mar the book least, as near the middle as possible. Labels stick better if the place where they are pasted is moistened with a solution of ammonia and water, to remove varnish or grease. After the call-number is written, varnish the label with a thin solution of shellac in alcohol. Labels put on in this way will keep clean, remain legible, and rarely come off. Books wear better if they are carefully opened in a number of places before they are placed on the shelves. This makes the backs flexible and less likely to break with rough handling. In cutting the leaves, be sure that the paper knife does its work to the very back edge of the top folds, and that it is never sharp enough to cut down into the leaves.

BINDING.

BY IRENE SMITH, PUBLIC LIBRARY, DENVER.

Binding a book means not only covering it, but preserving it. Good binding, even at a high price, educates the public taste

and promotes a desire to protect the library from injury and loss. Cheap binding degrades books and costs more in the end than good work. Keep in a bindery book a record of each volume that the library binds or rebinds. Enter in the bindery book, consecutive bindery number, book number, author, title, binding to be used, date sent to the bindery, date returned from bindery, and cost of binding. Books subject to much wear should be sewn on tapes, not on strings; should have cloth joints, and tight back of tough, flexible leather. Very few libraries can afford luxurious binding. Good material, strong sewing, and a moderate degree of skill and taste in finishing are all they can pay for. Learn to tell a substantial piece of work when you see it, and insist that you get such from your binder.

Many books will need repair. A few hours spent in the bindery, studying the methods of putting a book together, will be helpful, not only in the matter of securing good binding, but in the repairing of books that have gone to pieces. Mend and rebind your books the minute they seem to need it. Delay is the extravagant thing in this case. If you are slow in this matter, leaves and sections will be lost, and the wear the broken-backed volume is getting will soon remove a part of the fold at the back of the several sections, and make the whole book a hopeless wreck forever.

KEEPING ACCOUNT OF BOOKS LENT.

BY CHARLOTTE A. BAKER, PUBLIC LIBRARY, DENVER.

Have stiff manilla or ledger paper cut into slips five by three inches. For convenience, they should be made into pads. These slips should be ruled horizontally every three-eighths of an inch, and once vertically three-quarters of an inch from the right-hand edge. In the right-hand space on the upper line have "date" printed. Make both sides alike. On the top line write the borrower's name, putting the name first—Hutton, Alice. On the second line write the author and short title of the book taken, and in the space at right the date. If there is more than one copy of a book in the library, the arbitrary letter or number that distinguishes them from one another should be written after the title. If the books are catalogued the "call-number," as CS11a may be used instead of author and title. When a book is renewed, cross the first date out and write the date of renewal over it. When it is returned, draw a pencil through the whole line.

These slips should be arranged alphabetically by the borrowers' names, the new ones being sorted into their places from day to day. They can be held by a rubber band and kept in a convenient place. If there are many of them, a special tray can be bought for the purpose. Under this system a borrower may have charged to him without confusion more than one book at a time; books may be taken and returned at different times if one wishes. When one side of the slip is full the other can be used by writing the borrower's name again on the top line.

If for any reason a teacher wishes to keep a record of a particular scholar's reading, the slips with his name on them can be saved. Otherwise, they are destroyed when filled.

If expense is a consideration, the ruling and printing on the slips may be omitted. The lines and the word "Date," and, if it is wished, the name of the library at the bottom can all be printed at one impression, and very cheaply.

YOUNG PEOPLE, THE SCHOOLS, AND THE LIBRARY.

If possible, give the young people a reading room of their own, and a room in which are their own particular books. These special privileges should not bar them from the general use of the library. Make no age limit in issuing borrowers' cards. A child old enough to know the use of books is old enough to borrow them, and to begin that branch of its education which a library only can give. Teachers should be asked to help in persuading children to make the acquaintance of the library, and then to make good use of it. One of the functions of the public library is manifestly to raise the standard of scholarship among the teachers themselves. Until this is done, not much can be accomplished through teachers in encouraging and directing the reading of their pupils.

A visit to teachers in their school rooms by librarian or assistant will often be found helpful. Lists of books adapted to school room use, both for the teacher and for pupils, are good.

Take special pains to show children the use of indexes, and indeed of all sorts of reference books; they will soon be familiar with them and handle them like lifelong students. Gain the interest of teachers in this sort of work, and urge them to bring their classes and make a study of your reference books.

ABOUT LIBRARIES AND LIBRARY MANAGEMENT.

BEGINNING A SCHOOL LIBRARY.

BY J. F. DANIELS, LIBRARIAN STATE NORMAL SCHOOL,
GREELEY.

What would you do if you were away from the loving care of a city school board and were wrestling with the matter of reading and school room libraries? We have looked at that matter many times, and the poor schoolma'ams who write us about it are many. We have been trying to discover something within the school out of which a library might come; because we are not sure that the influence or help from without is the better plan.

The library of the State Normal School attempts to keep in touch with its hundreds of graduates and students who are now teaching, and to get from their experiences the things which will help some other worker.

At present we are holding close to two lines: School libraries and school room decoration.

It takes too long to tell all one tries to do; but here is a sample case, so to speak; and we cheerfully recommend the scheme to teachers who have no way of getting money and books from school boards which haven't the price. The thing has been done and seems easy:

Organize your pupils in deliberative assembly, and let them name themselves The ——— Grade Library Association. You will have to look up many things in Roberts' Rules of Order, or lose your hold on your pupils. You, the teacher, learn something of classification and the business of keeping a library just as your needs increase. The children will be like a young horse, hard to hold; but it is a pleasure to see them grow warm over the whole matter. Soon they bring in books to you to be used as a loan collection, and in their association meeting (Friday is a good day

for that) they will elect their officers, and the books will be cared for. Put a few of your own books in to start the thing along. If you have no books, more's the pity; you ought to have them.

What you want is a library in fact—a magnet which will draw books to it. Books have a great habit of collecting themselves—gravitating, we may say—if conditions are at all favorable.

We have, ready to publish, a more elaborate description of this thing, which we call a library association, and hope that it may be a useful publication.

We suppose that you will do the rest.

When our plan is printed we shall be glad to supply all Colorado teachers.

SCHOOL ROOM LIBRARIES.

BY CLARISSA S. NEWCOMB, LIBRARIAN SCHOOL DISTRICT
NO. 17, DENVER.

To one who knows how to use books, a well selected library is one of the most valuable means of education. The training of children in the choice and use of books is therefore an important subject to all teachers. An early beginning is necessary or else the great majority—those who leave school before the higher grades are reached—wholly escape this training.

But how shall this training be given, is the question. How shall we bring the child in touch with good books? Our experience in district No. 17, Denver, leads us to believe that each school room should have its library. We have found that a collection of fifty books in a room, chosen with reference to the age and ability of the pupils in that room, is the most satisfactory means of forming a taste for good literature. We have tried other methods—the central library, the library in the principal's office, and the plan of moving books from one room to another. The room library—that is, a certain number of books which are the permanent property of the room—has proved the best, because it acts as a training school for the use of the larger public library. We favor the room library for the purpose of getting the little folks accustomed to the use of the books and for the immediate use of the pupils in the upper grades. The more expensive books which can not be afforded for each room are kept in the principal's office. Thus the pupils are led to the public library for the use of which these small collections have well trained them. That this room library plan increases the demand for books from the public library has been demonstrated to us by the greater number of cards now held by the pupils.

Beginning with the second grade, each room in the district has its own collection of books, which remain there from year to year. As the children go from grade to grade they are each year brought in contact with another set of books new to them. Instead of moving the books, we move the children. Each room has its reference books and its books for lending. When not in use these are on a table or on shelves accessible to the children at all times. The pupil thus becomes acquainted with the books and feels a personal pride of ownership, and the close contact of the child with the books teach him to love and respect them. He becomes interested in reading and familiar with his own small library.

Fewer disappointments occur in the selection of books than where the collection is larger; hence fewer obstacles are presented in the formation of a love for reading. The range of choice is narrowed and the teacher feels the responsibility of directing the children's reading, for the library is but another tool with which to mould the character of her pupils. All become readers if the teacher is skillful and tactful and enters sufficiently into child life to appeal to the pupils. Many teachers have found the library an effective means of reaching and interesting dull or indifferent pupils.

The teacher can influence and largely control the children in their choice of reading. A reference to a book little used is enough to commend it to some one in the room, and its reputation is established. Or some pupil may be asked to give an extract from a book he has lately read. That will interest the other children, who will wish to learn more about it. The recitation is made brighter, and that book goes into the homes and keeps the children from the street.

Each book is selected not alone because of its intrinsic merit, but also because it has proved interesting to several children of like age and grade. No mistakes have been made when we have left the matter to the children. They know what they enjoy. When we find any attractive book, we try it in a room. If it is approved by those relentless little judges, the children, we buy a copy for each room of that grade. In the case of a very popular book, we sometimes place two or more copies on the shelves.

We do not attempt to force upon the children books that are highly instructive, or we think they ought to like. We try to supplant the trashy stuff by providing them with good yet interesting books. Our aim is to give them a love for good literature, for when they have acquired that, we need have no fear that their education will stop when they leave school.

No child should be expected to read every book in the room library. The reason is obvious; tastes differ among the children, as among adults. Out of the fifty books, representing history, biography, adventure, fairy stories, etc., each child will no doubt find some which he will enjoy. Within the room list we let the child select for himself. Any book which is really enjoyed, which enlarges the range of thought, which makes him happier, is worth the reading, even though it has no visible purpose as a part of his school education.

AGRICULTURAL COLLEGE LIBRARY.

Fort Collins. Founded, 1878; volumes, 9,887; librarian, Marguerite E. Stratton; established by the college and maintained by appropriations from the college fund.

The library has outgrown the room designed for its use, and about 2,500 of the volumes have been moved to the basement until better quarters can be provided. The students of the college have free access to the library every day in the week and can draw books from any of the departments to supplement the work of the text books.

BUCKINGHAM LIBRARY—UNIVERSITY OF COLORADO.

Boulder. Founded, 1887; volumes, 13,500; librarian, Alfred E. Whitaker; established by Charles G. Buckingham, Esq.; maintained by annual appropriations made by the board of regents, from state appropriations.

Needs, etc. More funds needed for departments of history and general literature; special library building an early necessity for the accommodation of the collection and its security.

A UNIVERSITY LIBRARY AND ITS WORK.

BY A. E. WHITAKER, LIBRARIAN.

The work of the library of the University of Colorado is so related to and interwoven with the whole work of the university as to form thereof, in fact, an integral part. Its standard is the ideal university library. This, related to the school library and the public library, though on broader and higher lines of work, is distinct as to its class of users, its immediate objects, and, consequently, in the character and method of its development and

administration. It accomplishes much allotted to the school library; but its field is confined to no curriculum or department.

The student, equipped by years of preparatory drill, enters college to complete and round out his intellectual training. The college assumes the responsibility of directing this important stage in his career.

By the methods now employed the text-book is earlier abandoned for personal research and investigation. The student's work is outlined, through source and authority, under direction of able instructors. To the successful prosecution of this work the college library is a vital condition—not a mere complement of class work, but an essential and necessary factor. Given these conditions, its general character is readily determined.

It is distinctly a library for study. Investigations must be made on the lines suggested in the class-room, references examined, and material gathered from every available source. This calls for numerous authorities, and these the library must supply. Each department of instruction must find its special demands for working material met, and promptly, by the resources of the collection.

With the "seminar" method in use, additional advantages accrue, by the temporary removal to rooms devoted to the purpose, of special libraries, for topical and collateral reading. Where funds permit, parallel collections are purchased to this end.

By this method of upbuilding of each of the several departmental libraries, the term "Working Library" comes, appropriately, to be applied to the collection in its entirety.

The college library is, moreover, emphatically reference in its character, rather than for circulating. It aims to make the best possible selection of the master-keys of information—the great books of reference, like cyclopædias, dictionaries, compends, etc., and the most extensive and complete files of periodical literature within its reach, as a source of infinite variety, treatment and value. Poole's and other available indexes to this and other classes of works must be supplied and their uses made familiar to the student.

Nor can the library lack the representative works that have served in the making of literature—the classics of other tongues—both in originals and in translations—nor the history-making books, though supplanted in some by treatises more recent.

Though the first purpose of the college student is study, and limited time remains to him for excursions in the field of general literature, yet the opportunity and invitation for culture by readings, outside the strict line of his curriculum, must not be

denied him by reason of a dearth of material. The library must fill in and round out its collection by due attention to belles-lettres, and such lines as claim the attention of no particular department and, perchance, are neglected by all.

The library of the University of Colorado aims to shape its progress, as closely and as rapidly as conditions may allow, to such an ideal, and to develop, for the college student, a collection fulfilling the conditions of Carlyle's definition—the "true university."

CANON LADIES' LIBRARY ASSOCIATION.

Canon City. Founded, March, 1886; volumes, 2,600; librarian, Mrs. S. F. Megrue; established by the ladies of Canon City; maintained by hard work of the ladies, in giving public entertainments, etc.

Condition and needs: The library was made free July, 1896, and since that time the circulation of books has increased from 640 in July, 1896, to 1,520 in February, 1897. We need more books and a new building.

COLORADO COLLEGE LIBRARY.

Colorado Springs. Founded in 1874; new building, March, 1894; volumes, about 17,000, and 10,000 pamphlets; librarian, Herman G. A. Brauer. New building donated by N. P. Coburn, of Newton, Massachusetts (\$45,000), the \$5,000 remaining from this gift devoted to purchase of books. There are also several endowment funds for purchase of books. A subscription library.

Condition and needs: The library is fairly well classified and catalogued; contains, besides books adapted more especially to a college library, a good collection of medical books and probably the largest collection in the state of theological literature. It is, moreover, one of the five regular depositories in this state for United States public documents, of which it has a large and growing collection. To this it adds a practically complete set of Colorado documents. The principal need is money, money, money, for up-to-date literature in every department.

THE N. P. COBURN LIBRARY OF COLORADO COLLEGE.

BY HERMAN G. A. BRAUER, LIBRARIAN.

The library building of Colorado College is the gift of N. P. Coburn, of Newton, Massachusetts. It was erected at a cost of \$50,000, and dedicated in March, 1894.

The building is of rare architectural beauty. It is built of the peach blow sandstone of Colorado, and roofed with red tile and copper mountings. The interior, with its ceiling twenty-six feet high, its red oak woodwork, its picturesque galleries, its inviting alcoves, its stone fireplaces, is exceedingly attractive. Long, arched windows, commanding views of the mountains and plains on either side, extend from floor to ceiling.

The number of volumes on the library shelves amounts at present to about 17,000, besides nearly 10,000 pamphlets. The leading literary and scientific journals are regularly received, as are also the United States government publications, and those of the state of Colorado. The library contains, besides the books adapted mainly to the various departments in the college, extensive collections of medical and theological books.

With the commencement of the year 1896, a new departure in the library management was inaugurated. The control of the library was vested in a board of twenty-five members, composed partly of members of the faculty and board of trustees of the college, and partly of ladies and gentlemen not connected with the college.

In the absence of anything like an adequate public or subscription library in the town, it was thought that the educating advantages afforded by access to the best books in literature, history and science, might be extended to all the citizens of Colorado Springs, without detriment to the interests of the students and professors of the college. The library was, therefore, opened as a circulating library, and the arrangement has been found entirely practicable. Access to the shelves is permitted, and all the privileges of the library, including the use of all the current magazines and periodicals taken by the college, are open to the public on payment of the same small fee (\$3 annually) required of college students. Teachers pay only one-half this amount.

There are several endowment funds on which the library depends for the purchase of new books, and it is hoped that these will be considerably increased in the near future. A fund has also been started for the purchase of all the good recent fiction, which, it is hoped, will be available soon.

The library needs money, money, money.

COLORADO SPRINGS FREE READING ROOM AND PUBLIC LIBRARY.

Colorado Springs. Founded, 1885; volumes, about 2,400; librarians, Miss A. M. Rohl and Mrs. A. T. Dunbar. Established, by committees from the churches, as the Colorado Springs Social Union. Maintained by subscription for a number of years. About 1890 the city voted \$500. In years following it increased gradually to \$900, and this year, 1897, the city gives \$1,500, and we have a membership fee of \$1, which is optional. The circulation is rapidly increasing, and we are taxed to our fullest capacity to supply reading matter enough. The rooms are used for reading, mostly by men. There seems to be a growing knowledge and appreciation of the library and reading room.

THE CITY LIBRARY.

Denver. Founded, November 1, 1886; volumes, 31,000; librarian, Charles R. Dudley. Established by Chamber of Commerce; maintained jointly by that institution and the city of Denver.

Condition and needs: Are doing more and better work than ever before. Our only needs are more room and more money.

DENVER CITY LIBRARY.

The City Library was established by the Chamber of Commerce, in 1886. About \$15,000 were contributed by members for the purchase of books, and the doors were opened to the public November 1, with 3,000 volumes ready for lending. The fourth floor of the chamber's new building, 120x50 feet, was given wholly to the library. For five years no help was received from outside; then the city council made an appropriation of \$6,000 a year. This has since been increased to \$7,500. In January, 1895, the library was removed to the first and second floors of the same building. This gives one floor to reference books and reading room, and one to the circulating department. The number of books is now about 31,000; the circulation averages about 500 a day.

PUBLIC LIBRARY.

Denver. Founded 1878, as the Public School Library; in 1889, as the Public Library; librarian, J. C. Dana. Established and

maintained by the board of education, school district No. 1. More room is greatly needed. Volumes, 35,000.

THE PUBLIC LIBRARY, DENVER.

BY EVA SIMMONS, PUBLIC LIBRARY.

"Open from 9 a. m. to 9 p. m. every day in the year," is the first bit of information which meets the eye of the visitor to the Public Library of Denver. Indeed, it is all that he may learn from the signs, excepting that his dog is not welcome. The rest he finds out by talking with an attendant, by questions, and by reading the few rules printed on the back of the card issued to him.

Cards are issued to any reputable resident of Denver and vicinity, on his signing an agreement to comply with the library regulations. All other persons must have the agreement countersigned by some business man or property holder of the city.

Any card holder may borrow at any time, two books; Provided, Only one of them is a book of fiction or a current magazine. Fiction is lent for seven days; all other books for fourteen days. Magazines for the current and two preceding months, are lent for three days and are not renewable. A fine of two cents per day is charged on each volume kept longer than the specified time. When a book becomes one week over-due a notice is sent to the borrower asking for its return. Later, if the book is not returned, a messenger is sent for it.

Arrangements can be made for keeping a book longer than the specified time. A definite date must be fixed for the return of books so taken. A "special arrangement" slip is put in the pocket of the book and must be returned to the library with it.

Books may be once renewed for the same length of time for which they were originally taken. To renew a book, the borrower's card and the number of the book must be brought to the library, or if issued without a card, the number of the book and the date of issue are required.

Any book, excepting new fiction, will be reserved for a borrower, upon request.

Visitors are admitted to all parts of the library. Books may be taken from the shelves and brought to the delivery counter to be charged. There is no printed catalogue of the books in the library. A complete slip catalogue of all books, other than fiction, arranged by author, title and subject, may be found in the tin trays, just inside the gate by the delivery counter. Here,

also, is a card catalogue of fiction; this is made up of two alphabetical lists; the first by author, the second by title. From time to time lists are issued on special subjects; for example, books about the Jews; books having to do with Trades Unions; books about the Cliff Dwellers. These may be had upon request.

A special room for children contains about 6,000 volumes, to which they have free access.

The library lends about 27,000 volumes per month for home use, and about 15,000 persons other than borrowers make use of its books every month.

YOUNG FOLKS LIBRARY.

La Junta. Founded in 1888; volumes, 8,077; librarian, Mrs. Laura Leib; established by T. T. Woodruff in 1888, who has maintained it heretofore. The town now collects a small tax, under the state law, which helps to maintain a reading room. The Women's Club has done a good deal in aid of the reading room. The school board gives \$200 a year towards reading room and library. The library is in a fairly good condition, but needs to be adopted by the town, instead of depending almost wholly upon individual effort. It seems to be doing a good work, particularly with the clubs and the school children. There is no special effort to make it a mere circulating library, though it aims to supply the best of current literature, in fiction as well as in other departments. Its principal and most successful work is with the young people.

McCLELLAND PUBLIC LIBRARY.

Pueblo. Founded, 1891; volumes, 7,540; librarian, J. Warren Chapman. Established by several gentlemen and at length given to the city, which maintains it.

We consider ourselves at present in fair shape. Our great need is a suitable book fund. The money spent for books now comes out of the savings on running expenses.

THE McCLELLAND PUBLIC LIBRARY, PUEBLO, COLO.

BY MRS. C. C. RICHARDSON.

"The understanding is indeed thy window; too clear thou canst not make it."

These words of Carlyle's seem a fitting text for a short sermon on the missionary work of our public library. This insti-

tution, like others of its kind, grew out of and was established to supply the crying need of the people. It did not spring into being Minerva-like. A little seed was sown; some fell on the stony soil of indifference; some was nearly choked by the tares of discouragement; but, thanks to the untiring efforts of the sowers of the seed, and to Mr. Andrew McClelland's generosity, a little library struggled into existence here in 1891.

Mr. J. W. Chapman, a man of learning and much experience in library and educational work, was installed as librarian. Soon afterward a thoroughly competent assistant was found in Miss Garnett. Under their able management the enterprise has prospered, and the work of the library—the furnishing of mental pabulum for all classes—constantly makes for greater and more widespread culture among our people. Such failures as have to be recorded are due to the limitations of insufficient material with which to work. It is far from an easy task to supply all sorts and conditions of men, with minds in every stage of development, with the required mental diet when the menu is limited. It requires infinite tact and understanding to offer apt suggestions to readers and students; yet this delicate task is part of the librarian's duty. If one ignorant person has been reclaimed from a taste for worthless and iniquitous literature, to an ideal even a few grades higher, who shall say the work of the library has been in vain?

The department doing, perhaps, the best missionary work is the reading room, with its cheerful message, "Everybody Welcome."

Our city wise men allow \$3,000 annually for the maintenance of the library. By rigid economy—by borrowing of Peter to pay Paul—a small amount was saved last year to buy books; but every cent is really needed for the running expenses, and an appropriation should be made for a book fund—our most pressing need.

Another helper is required, that the librarian need not be hindered by routine work, but may have time to acquire a perfect knowledge of the books on the shelves, to be of assistance in the capacity of a peripatetic index and encyclopædia. More time could also be employed in visiting the schools, gaining a more thorough understanding of their needs, and exchanging ideas and suggestions with the teachers as to choice of reading matter for the pupils.

Among our many needs, one which may seem of minor importance, is for pictures, casts, etc., which need not necessarily be expensive; but which, so the subjects be good, are most elevating and refining in their influence.

One other want has the McClelland Public Library—a suitable, comfortable, centrally located building of its own. This is a real need; but satisfying it seems so far in the future, one little more than breathes it. However, we may have it some time, and may joyfully exclaim:

“The temple of knowledge is in our very midst.”

MONTE VISTA LIBRARY ASSOCIATION.

Monte Vista. Founded, August, 1885; volumes, about 1,000; librarian, Omie Stephenson. Established by the Ladies' Literary club of Monte Vista, which still holds its place in connection with this library, and at home, except in business matters is known as the Library and Literary Association. It is maintained through efforts of the members of this association.

The present condition is as favorable as could be expected, under the circumstances. We need more books in the fiction line; but at present our efforts are in the main directed toward paying off the one hundred dollars still due on the library building. A floral fair, the second in the series, will be held about August, for this purpose.

MONTROSE PUBLIC SCHOOL LIBRARY.

Montrose. Founded, April, 1896; volumes, about 700; librarian, Alice M. Catlin. Established by citizens under the name of the Montrose Public School Library Association. This association obtains by annual membership fees and entertainments two-thirds the money expended for books; the remainder is derived from the library tax which was levied for the first time about a year ago.

A meeting was called last Tuesday to devise ways and means for obtaining funds for more books, the number in the cases being inadequate to meet the demands of the pupils. It was decided to constitute the high school a committee to canvass the town for memberships for the coming year. Mr. Catlin, secretary of the school board, offered to reward that pupil whose industry shall accomplish the most successful result, by giving him a handsome new volume of classics, and Mr. Redding, treasurer of the school board, promised to reward that pupil whose efforts are next most successful by giving a volume equal in merit to that offered by the secretary. We want more books. The people are interested and generous; but each order of books seems like a drop in a bucket.

MONTCLAIR PUBLIC SCHOOL LIBRARY.

BY CLARA E. LOWELL, PRINCIPAL.

Six years ago the school board decided to have a library in connection with the school, and set apart a small sum of money to be used for library purposes each year. The first selection contained a few books each of biography, science and philosophy, history, reference, travel, poetry, essays, fiction and juvenile literature. Around the nucleus thus formed the library has grown till it numbers over twelve hundred volumes. It has recently been catalogued according to the decimal system, in order to more easily and safely catalogue the yearly additions. Being so closely connected with the school, the pupils are becoming truly acquainted with books. The parents, and all in any way connected with the district, make so much use of the library that the shelves present a deserted appearance most of the time.

STATE NORMAL SCHOOL LIBRARY.

Greeley. Founded in 1891; volumes, 7,000; librarian, Joseph F. Daniels; established by the school trustees in 1891, with about 800 volumes; books purchased by money appropriated from funds of the school. Condition: In a good large room, well lighted; 200 periodicals; books classified; circulation, over 20,000 per month. The library's attempts to reach the alumni in various ways have increased its usefulness. We try our best to make our students love a library and to assist them in their school work.

FREE PUBLIC LIBRARY.

Trinidad. Founded, October, 1882; volumes, 7,412; librarian, Thomas Winsor. Established by an association of Trinidad people. Maintained by donations, subscriptions and by an appropriation from the city funds, annually made by the city council.

Made a free public library in the year 1892, when a worthy gentleman, Mr. T. T. Woodruff, then of Boston, Massachusetts, now of La Junta, Colorado, gave to it several thousand volumes of books. He still aids it very liberally; 2,291 persons have taken application cards for receiving books since it became a free library. It is very freely used by the pupils in the public schools of the city.

LIBRARIES NOT ELSEWHERE NOTICED.

The University of Denver, which has a general university library and a theological library, together aggregating about 10,000 volumes; and the State School of Mines at Golden, with a very choice collection of about 10,000 volumes on the special subjects to which education in that school is devoted; and the free public library at Greeley, a most admirably selected set of about 5,000 books, failed to make any returns, and consequently are not formally set forth in the preceding pages. They all should be mentioned, however, as worthy additions to the library roll of the state.

LIBRARIES SOON TO BE.

The cities of Leadville, Boulder, Cripple Creek, Victor and Florence are all seriously considering the establishment of free public libraries. In some or all of them the movement now on foot will result in something tangible within the next few months.

COLORADO LIBRARY ASSOCIATION.**MARCH MEETING.**

The association held its regular monthly meeting on March 12, in the East Denver high school, district No. 1. The subject for the evening was "Children's Reading: Opinions and Suggestions of Teachers." An interesting discussion was participated in by a large number of teachers from all parts of the city, the attendance, about fifty, being the largest of the season.

Before taking up the regular discussion of the evening, President Whitaker, of Boulder, made a few remarks on library matters in that city. At the February meeting of the association, which was held in Boulder, a committee was appointed to consider plans for starting a public library in that city, and also to try to have the matter of a special tax levy for the support thereof, brought up at the next election. Mr. Whitaker reported that the committee was at work, but that no definite action had been taken, and it was considered the best policy not to bring up the tax question at the present time.

Communications from the Colorado Equal Suffrage Association, and the Civic Federation, endorsing the bill to establish a state library commission, were read; also communications from

people in Leadville, Florence and other places, asking for information concerning libraries and methods of starting them. If the bill mentioned passes, it will be the duty of the commission to attend to all such matters, and to give advice and information in regard to starting libraries, buying books, cataloguing, and all details of library economy and administration. As the members of this commission will serve without pay, and as only a small appropriation is asked to cover clerical assistance and incidental expenses, it should have the support of all persons interested in educational work.

Mr. Lee, who is the chairman of the committee having this bill in charge, reported that the outlook for its passage was favorable, and asked those present to use their influence for it.

A communication from the Educational Alliance of Denver, asking the Colorado Library Association to send a delegate to their council, was read, and Dr. Mary Barker Bates was appointed such delegate. Mr. J. H. Van Sickle reported briefly on the Round Table on libraries, held at the meeting of the school superintendents in Indianapolis.

The regular discussion of the evening, "Children's Reading," was then taken up. The Public Library, Denver, had sent to teachers in the first four grades a series of questions which, with the answers, are given below. The questions were sent to 101 teachers and eighteen principals; eighty-five were returned, with the following results:

1. Do you think it would be well for pupils in your grade to read more books? Seventy-three say yes; one says no.

2. How early in their school life is it possible, on the average, to interest children in independent, outside reading? Thirty-two say in the first grade; twenty-five say in the second grade, and fourteen say in the third grade.

3. Could you increase the amount of reading done by the children in your grade if you had the books which you could lend them for home use? Could you increase the reading, even in the first grade, if you had appropriate books to lend? To the first part, seventy-three say yes, and two say no. To the second part, forty-four say yes, and six say no.

4. Can you name some of the more essential characteristics of the books which especially interest the children in your grade? Thirty-one say about plants, animals, and such familiar things; twenty-four say fairy tales, adventures, etc.; eleven say that stories must have some human interest or application, and this is implied by the answers of most of the first thirty-one; ten mention the fact that the books should be illustrated.

5. To the children of what grade can you show the difference between books—between those that are true to life and those that are not; between those that may be called good literature, and those that may be called silly? To those, say, below the fifth grade? To the second part thirty-two say yes, and five say no.

6. What proportion of the children under your care do you think are in the habit of reading books? As many as one in ten? The average estimate is thirty per cent.

7. Do the children under your care read the trashy story papers and nickel libraries, to any great extent? Fifty-one say yes; six say no.

Mr. Aaron Gove asked whether these questions and answers referred to books naturally chosen by the children themselves or to books placed in their hands by the teachers. Mr. Dana replied: Those selected and given them by teachers.

The conclusions arrived at from these questions are, that children may be interested at an early age in reading books not connected with their school work; and, if attention is given to the matter by the teachers they can be interested in the better class of literature.

Mr. Dana thought that children did not read enough and should be encouraged to read more; but Mr. Gove thought that their reading should be limited, or most of it done aloud, as they were otherwise liable to acquire the habit of skimming over the words to get their meaning and pay no attention to spelling or pronunciation.

Several teachers from the North Side schools were present, and it had been planned to have them talk on the system of school room libraries, as conducted in that district, but this had to be deferred, on account of the lateness of the hour. The association will have that topic considered at the next meeting.

There will be two more regular meetings of the association this season.

II. E. RICHIE, Secretary.

A FEW REFERENCE BOOKS FOR COMMON SCHOOLS.

BY JOHN PARSONS, PUBLIC LIBRARY, DENVER.

Bartlett, J., ed. Familiar quotations. 1892. Little. Cloth. \$3.00.

Brewer, E. C. Dictionary of phrase and fable. Cassell, 1/2mor. \$2.50.

Brewer, E. C. Historic note book. 1892. Lippincott, 1/2mor. \$3.50.

- Bryant, E. C., ed. Library of poetry and song. 1874. Fords Howard. Cloth. \$5.00.
- Champlin, J. D., Jr. Young folks' cyclopædia of common things. 1890. Holt. Cloth. \$2.50.
- Champlin, J. D. Jr. Young folks' cyclopædia of persons and places. 1892. Holt. Cloth. \$2.50.
- Champlin, J. D., Jr., and Bostwick, A. E. Young folks' cyclopædia of games and sports. 1890. Holt. Cloth. \$2.50.
- Harper's book of facts. Lewis, C. T., ed. 1895. Harper. \$8.00.
- Jameson, J. F. Dictionary of United States history. 1492-1894. Putnam Publishing Co.
- King, Moses, ed. Handbook of the United States. 1891. King. \$3.50.
- Lossing, B. J. Popular Cyclopædia of United States History. 1893. 2 vols. Harper. Morocco. \$15.00.
- Standard dictionary of the English language, 2 vols. 1865. Funk. Half Russia, with Denison index. \$17.00.
- Wheeler, W. A. Explanatory and pronouncing dictionary of noted names of fiction. 1892. Houghton. Cloth. \$2.00.
- Wheeler, W. A. Familiar allusions. 1891. Houghton. Cloth. \$2.00.
- World almanac and encyclopædia. 1897. New York World. Paper. 25c.

POPULAR BOOKS OF FICTION FOR YOUNG FOLKS.

BY ZOE D. GUERNSEY, PUBLIC LIBRARY, DENVER.

- Fast Friends, J. T. Trowbridge.
- Swiss Family Robinson, J. R. Wyss.
- Robinson Crusoe, Daniel Defoe.
- Editha's Burglar, F. H. Burnett.
- Old-Fashioned Girl, L. M. Alcott.
- Birchwood, A. B. Williams.
- Cudjo's Cave, J. T. Trowbridge.
- Eight Cousins, L. M. Alcott.
- Around the World in Eighty Days, J. Verne.
- Dick o' the Fens, G. M. Fen.
- Under False Colors, S. Doudney.
- Crowded out o' Crowfield, W. O. Stoddard.
- Little Women, L. M. Alcott.
- Hans Brinker, M. M. Dodge.
- Treasure Island, R. L. Stevenson.
- Cast up by the Sea, S. Baker.

Toby Tyler, J. Otis.
Two Little Pilgrim's Progress, F. H. Burnett.
Huckleberry Finn, S. L. Clemens.
Tom Sawyer, S. L. Clemens.
Jack and Jill, L. M. Alcott.
Cruise of the Canoe Club, W. L. Alden.
New Robinson Crusoe, W. L. Alden.
Story of a Bad Boy, T. B. Aldrich.
We Girls, A. D. T. Whitney.
Across Texas, E. S. Ellis.
Seven Little Sisters, J. Andrews.
Dog Crusoe and His Master, R. M. Ballantyne.
Wild Man of the West, R. M. Ballantyne.
Brought to the Front, E. Kellogg.
Winning His Way, C. C. Coffin.
Clover, S. C. Woolsey.
David Vane and David Crane, J. T. Trowbridge.
Donald and Dorothy, M. M. Dodge.
Hoosier School Boy, E. Eggleston.
Adventures of Jimmy Brown, W. L. Alden.
Adventures of a Chinaman, J. Verne.
From Powder-monkey to Admiral, W. H. G. Kingston.
Forest Exiles, M. Reid.
Five Little Peppers; M. Lothrop.
Redskin and Cowboy, G. A. Henty.
Facing Death, G. A. Henty.
Held Fast for England, G. A. Henty.
In the Rocky Mountains, W. H. G. Kingston.
Snow-shoes and Canoes, W. H. G. Kingston.
Nan, L. C. Lillie.
Little Lord Fauntleroy, F. H. Burnett.
Dorrmates, K. Munroe.
Left Behind, J. Otis.
Wire and Wave, K. Munroe.

POPULAR BOOKS (NOT FICTION) FOR YOUNG FOLKS.

Three Vassar Girls Abroad, E. W. Champney.
Two Years Before the Mast, R. H. Dana.
Boys' Book of Famous Rulers, L. H. Farmer.
Old Times in the Colonies, C. C. Coffin.
Boys of '76, C. C. Coffin.

Boys of '61, C. C. Coffin.
 Girls' Book of Famous Queens, L. H. Farmer.
 Life of Lincoln, N. Brooks.
 Adventures of Captain Kidd, J. S. C. Abbott.
 Wild West, W. F. Cody.
 Boy Travellers in Japan and China, T. W. Knox.
 Children of the Cold, T. Schwatka.
 American Boys' Handy Book, D. C. Beard.
 Blue Fairy Book, A. Lang.
 Daniel Boone, J. S. C. Abbott.
 Children's Book, H. E. Scudder.
 Stories of the Gorilla Country, P. Du Chaillu.
 Black Beauty, A. Sewall.
 Wild Life Under the Equator, P. Du Chaillu.
 Stories Mother Nature Told, J. Andrews.
 Wonder Book, N. Hawthorne.
 Alice's Adventures in Wonderland, C. L. Dodgson.
 Arabian Nights' Entertainments.
 King of the Golden River, J. Ruskin.
 Child's History of England, Charles Dickens.

A "UNION LIST OF PERIODICALS."

BY A. E. WHITAKER, LIBRARIAN STATE UNIVERSITY,
 BOULDER.

The good work being done by the Colorado Library Association for the advancement of library interests and the cultivation of a library spirit in our state, is proving most helpful to librarians in their work, and has received appreciative recognition from the public. This suggests another library aid, which would be of great service in all of our libraries—namely, a single combined list of the magazines, journals and newspapers possessed by the principal libraries of the state. It would be appreciated by every librarian, and would prove valuable data to every student in the state.

Union collections are numerous and convenient. In other states this work has been done successfully and with benefit. Here, where libraries are so widely apart, their advantages would be the more thoroughly appreciated.

This work could be done by coöperation, and would seem, very appropriately, to come within the province of our State Library Association.

A WORD ON MAGAZINE CLUBS.

BY LILA E. VAN, PUBLIC LIBRARY, DENVER.

In a magazine club, in its commonest form, a few neighbors each put in yearly enough money to pay for one of the leading popular periodicals. As these come month by month they are received by one member. To each member he sends a certain magazine on its arrival, with a list of the other members, and every week are all changed by each member calling for his magazine from the member whose name is next above his on the list. The magazines in this way pass from one to another. Each member has the reading of all the magazines for the price of one.

It is usually cheaper and easier to send to a magazine agency, when subscribing, securing their club rates, than to write to the publishers themselves. Among such agencies, G. E. Stechert, 9 East Sixteenth street, New York, and William Guild, 11 Bromfield street, Boston, are reliable.

TEN POPULAR MONTHLIES.

BY LILA E. VAN, PUBLIC LIBRARY, DENVER.

Century: One of the best and most widely circulated of popular magazines. (Century Pub. Co., 33 East Seventeenth street, New York; \$4.00.)

Cosmopolitan: Contains many illustrations, is very light and very popular. (Cosmopolitan Pub. Co., Irvington, New York; \$1.00.)

Forum: A serious, practical, and reliable review; ranks with the best English reviews. (Forum Pub. Co., Union Square, New York; \$3.00.)

Harper's Monthly: Excellently illustrated magazine of general interest. (Harper Bros., Franklin Square, New York; \$4.00.)

McClure's Magazine: Profusely illustrated with half-tones and immensely popular. (McClure Pub. Co., 144 East Twenty-fifth street, New York; \$1.00.)

North American Review: One of the most widely read of the more serious reviews of this country. (North American Review, 3 East Fourteenth street, New York; \$5.00.)

Popular Science Monthly: Best general scientific magazine of this country. (D. Appleton & Co., 1 Bond street, New York; \$5.00.)

Review of Reviews: A widely circulated political and literary review. Each number contains an index to articles in leading magazines. (Review of Reviews, 13 Astor Place, New York; \$2.50.)

St. Nicholas: A well-illustrated magazine for children of all ages. Conducted by Mary Mapes Dodge. (Century Co., Union Square, New York; \$3.00.)

Scribner's Magazine. An illustrated general magazine—ranks with Harper's and Century. (Scribner's Sons, New York; \$3.00.)

TEN POPULAR WEEKLIES.

BY LILA E. VAN, PUBLIC LIBRARY, DENVER.

Harper's Bazar: An excellently illustrated family and fashion journal. Notable for its fine wood cuts. (Harper Bros., New York; \$4.00.)

Harper's Weekly: The best illustrated weekly of general interest in this country. (Harper Bros., New York; \$4.00.)

Harper's Round Table: Excellent children's paper. (Harper Bros., New York; \$2.00.)

Judge: A humorous paper, containing many cartoons; Republican. (Judge Pub. Co., Judge building, New York; \$5.00.)

Life: Best American humorous paper. Satirizes the fads and faddists of society, politics, art and literature. (Life Pub. Co., 19 West Thirty-first street, New York; \$5.00.)

Literary Digest: A compend of magazine articles; includes brief notes on the events of the week. (Funk & Wagnalls, 30 Lafayette Place, New York; \$3.00.)

Public Opinion: A collection of current fact and opinion from periodicals, chiefly newspapers. (Public Opinion Co., New York; \$2.50.)

Puck: Like Judge in general character; and like Judge it serves politics—the Democratic party. (Keppler & Schwarzmann, New York; \$5.00.)

Scientific American: Contains illustrated articles on modern inventions, machinery, engineering projects and scientific discovery. (Munn & Co., 361 Broadway, New York; \$3.00.)

Youth's Companion: Excellent story paper for children, often interesting to older people. (Perry Mason & Co., 201 Columbus avenue, Boston; \$1.75.)

AN ANNUAL INDEX.

The Annual Index includes entries of all the articles of 1896 in a long list of popular and standard periodicals. It indexes the book chapters and essays in composite books, the bibliographies published in 1893, a necrology of all writers deceased during the year, and such an index of dates of events as practically indexes the daily papers of the year. This is, of course, one of the most useful tools that a library man can have. It costs \$3.50, and may be purchased through any book seller, or of the Publisher's Weekly, 59 Duane street, New York.

A MONTHLY INDEX TO PERIODICALS.

The Cumulative Index to Periodicals is an index of the contents of about fifty of the leading periodicals of this country and England, published for about \$5.00 a year, by the Public Library, of Cleveland, Ohio. It is issued monthly, each issue during the year, including all the entries of the previous month. It is invaluable even to the small library. It makes available the contents of the recent magazines.

INDEXES, PUBLIC LIBRARY, DENVER.

BY JOHN PARSONS.

A library is a great store house, but one in which the various goods on hand can not be visibly displayed, as with groceries or dry goods. How to find just what one wants must be a very perplexing question to one who has not by practice become familiar with the use of a library. This is especially true of that vast amount of literature, often embodying the very latest thought upon the more important subjects, which appears in the reviews and magazines. It would be almost a hopeless task to find such information were it not for certain books which serve as a guide here. First and foremost among them is Poole's Index to Periodical Literature, so called after the late W. F. Poole, who began the work, and deserves to have the honor of giving his name to the Index.

This is an index to a pretty complete list of the periodicals printed in the English language of a general character and interest. Purely professional and scientific magazines, medical,

legal, botanical, etc., are not included. The aim is to reach the needs of the general student, literary men and writers for the press.

This index, in the third edition, under Mr. Poole's superintendence, but with the coöperation of many other librarians, was brought down to 1882. A new supplement is published once in five years. There are now two of these—1882-1887, and 1887-1892. These have been published with the coöperation of the American Library Association—the former under the editorship of Mr. Poole, the later under that of Mr. Fletcher, librarian of Amherst college. There is also published, under the same auspices, a yearly continuation of this, called "The Annual Literary Index," and it is the five annual numbers of this, which combined into one index, make the supplement to Poole's Index, published each five years.

Other aids of great service, especially for the magazines of the current year, is the index to the leading articles of the previous month, published in each issue of the Review of Reviews. There was also begun during 1896 a new "Cumulative Index to a Selected List of Periodicals," which obviates one of the difficulties of the index of the Review of Reviews, since each month's issues combines into one index list those of the previous issues, thus necessitating the consultation of only one list for the various months of the current year. This is published monthly under the able superintendence of Mr. Brett, of the Cleveland Public Library.

In addition to these, there is published each month in the Engineering Magazine, a classified descriptive list of the leading articles published currently in the engineering, architectural and scientific press of the United States and Great Britain and the British colonies. These are classified under the headings, architecture and building, civil engineering, electricity, industrial sociology, marine engineering, mining and metallurgy, municipal engineering, railroading, scientific miscellany and improved machinery.

Mention should also be made of the indexes to some sets of magazines, as Harper's, Scribner's, North American, Popular Science Monthly, etc. These are often very complete in their character, and in some cases are very useful, because indicating which articles are illustrated.

Another index somewhat allied to these magazines indexes is the Index to General Literature, edited by Mr. W. I. Fletcher, of Amherst college. It is difficult to indicate very briefly the character of this index, but it may perhaps be said to be an essay in-

dex—an index to books which treat somewhat in essay form of many topics. This is commonly known as the “A. L. A.” index, because published under the auspices of the American Library Association. One volume only has been published, indexing almost 2,900 books.

A supplement is published each year as a part of the “Annual Literary Index.” These supplements will probably be combined into another volume. If the work could be broadened to include most of the books common to good sized libraries, it would be a most helpful index—a still more indispensable aid to seekers of information than it now is.

MAGAZINES IN THE SCHOOLS.

Some persons have asked, “What are you doing with magazines in the school room?” Of course, there are strictly juvenile magazines which are good and do their work. We have a periodical list with over 200 titles of different papers and magazines. Many of them are hardly worth the binding and are too good for burning. Such periodicals are “cut up” for what good is in them, and the matter classified more or less.

Then, too, we get duplicates of other magazines and cut them in the same way.

For example, we used four or five February McClure’s for the Washington pictures, and we think that it makes an interesting picture book for children who have begun to venerate the cherry-tree hero.

I have before me four sections torn bodily from three dirty-covered, worn-out magazines which were to have been thrown away. Here are the titles of the articles saved, which seem to interest the little folk: My Lady Make-believe (an illustrated poem), Mediaeval Castles and Strongholds, Children’s Day in Old Rome, Some British Castles.

When boys begin to read King Arthur or Froissart, it is advisable to have two of the above.

You can bind such things to suit yourself, if you know how; and if you don’t, why, that’s your fault.

PUBLIC LIBRARIES.

“Public Libraries” is a monthly journal of library economy, published by the Library Bureau, Chicago, at \$1.00 per year. The

first volume contains in its early numbers the chapters of a Library Primer, covering, in brief, the whole field of library economy. This primer, it is to be hoped, will be some day republished in book form. At present it is accessible only in the files of "Public Libraries." "Public Libraries'" contents are chiefly suggestive hints in regard to library management, together with news from all parts of the library field.

THE LIBRARY JOURNAL.

The Library Journal is the leading magazine of the world in the subject of library economy. It is now in its twenty-second year. It is published monthly. To the librarian of the largest or the smallest library, it is one of the indispensable helps. It costs \$5 per year; No. 59 Duane street, New York.

PUBLIC LIBRARIES IN AMERICA.

W. I. Fletcher, librarian Amherst College, Massachusetts, published, through Roberts Bros., Boston, not long ago, a most excellent volume on "Public Libraries in America." It contains much of value about library management.

MANUFACTURERS' CATALOGUES.

A teacher of machine shop work in one of the leading manual training schools in this country says in a private letter: "There is a large number of catalogues of tools, machinery, etc., published which contain much information of practical value in connection with steam machinery, strength of materials, hydraulics, etc. These can usually be had for the asking. In our manual training school we have a number of such catalogues already, most of them well bound, and I hope to arrange them as a separate department of the library. I consider the catalogue literature of reputable business concerns to be of especial value as setting forth progress along the various lines of industry." A good line of these catalogues kept up to date would be of great value in any library. The small library of limited means can get them, as they can usually be procured without expense.

CHEAP BOOKS AND GOVERNMENT PUBLICATIONS.

BY F. D. TANDY, PUBLIC LIBRARY, DENVER.

Cheap books! You can get them with a box of soap or a package of baking powder, and many of them are books which are considered among the world's best literature. Remember, though, that these same books can often be bought at a regular book store for the amount of postage it costs to get them as "premiums." But these books are but poorly made and cheaply put together in paper covers, and so are hardly suitable for a school or public library, though they often do to make a beginning. Better books can be obtained in more substantial bindings at a remarkably low figure. Those published by A. L. Burt, of New York, stand preëminent. His Library of the World's Best Books, containing the principal and more popular works of Spencer, Darwin, George Eliot and many other noted writers, may be had anywhere for \$1 per volume. The Home Library, issued by the same publisher, contains many of the standard works of fiction, and retails at seventy-five cents per volume. A liberal discount is allowed on even these low figures if many volumes are purchased at once. Several other publishers issue similar series, which may also be purchased at very low figures.

Many of the reports issued by the various departments of the United States government are very valuable. These, however, are usually gotten up in such an unattractive style that ordinary readers do not willingly read them. In the hands of a person who is at all familiar with their contents, they may be made to do excellent service. The various circulars and reports of the department of agriculture and the bureau of education contain some of the most valuable material printed in their special lines. For general scientific work of a more technical character, the reports of the Smithsonian Institution and the National Museum should be obtained. The reports of the bureau of ethnology will tell you all that you want to know about the Cliff Dwellers, Mound Builders, and other prehistoric races of our continent. "The Public Domain," issued some years ago by the public land commissioners, is very valuable for a book of reference in the school room or library. It contains a complete history of the domain of the United States, how it was acquired, and when, and much similar information. The reports of the various geological surveys are also of great service, though most of them are now hard to obtain. The reports of the census bureau, de-

partment of labor and some of the circulars of the treasury department should also be obtained. Many of these United States documents can be got free of charge, and most of the others for little above the cost of printing. The superintendent of documents, at Washington, issues a monthly catalogue of the government publications free of charge. By obtaining this and looking it carefully over, the librarian can see what documents have been issued which will interest his readers, and will find out how to obtain them.

Several of the reports of the state officers may also be put to good use. The reports of the commissioner of labor, bureau of agriculture, superintendent of public instruction, and the state engineer are among the more important. In short, a very valuable collection of books along certain lines of knowledge, may be had for the asking from the United States and the various state governments.

Articles not signed were written or compiled by J. C. Dana, Librarian Public Library, Denver.

SCHOOL ROOM DECORATION.

Issued by Grace Espy Patton, superintendent of public instruction and ex officio state librarian, Denver, Colorado, December 1, 1897.

Mary Holland Kinkaid, assistant superintendent.

Hattie E. Stevenson, assistant librarian.

Ella Briggs Hosick, clerk.

Among the subjects of paramount importance to educationists, there is none that arouses so deep an interest as that of school-room decoration. That education which fails to develop the æsthetic faculty is defective.

This pamphlet is one of the many efforts that are being made by the department of public instruction to present, in a practical manner, to the teachers of Colorado, the subject of school-room æsthetics.

That "School-Room Decoration" will accomplish the mission upon which it is sent, there is no reason to doubt.

The Department of Public Instruction is under obligations to Joseph F. Daniels, of the State Normal School, for his assistance in the decoration of the model school-room and in the preparation of this pamphlet.

GRACE ESPY PATTON,
Superintendent of Public Instruction and
Ex Officio State Librarian.

Denver, Colorado, December 1, 1897.

State Capitol.

"There is no such thing as commonplace except in your own mind; no such thing as beauty except in your appreciation of it."—W. M. Hunt.

Teachers often wish to know where a thing may be obtained, what it is called, and the price.

The dealer can give you the price, and this little pamphlet will give you many places and names.

This is not an essay on decoration. The writer, in the midst of other business, has endeavored to put in small compass a few hints and facts that may aid you in your work.

If you are fond of beautiful things, you may do a great deal for our state, though you may be in the most remote school house in Colorado. It is for you who are far away from the great houses and shops and interiors, that this is written, and nothing pleases me more than to think that, brief as it is, this may help you.

To Professor Grace Espy Patton, Superintendent of Public Instruction, I owe the pleasure of presenting this subject, and to her and to the faculty of the State Normal School, I am grateful for encouragement and sympathy in this as in all other matters educational.

*

JOSEPH F. DANIELS.

SCHOOL ROOM DECORATION.

School rooms ought to be more like rooms in which one lives; that is, like the best kind of home rooms.

Whatever the conditions may be, we must include everything in our schemes of decoration, for we cannot hope to change the nature of the equipment of a modern school room.

First, we ought to have order in a room. Teachers, who mean well, gather all sorts of articles for science work, in addition to a great many patriotic prints, autumn leaves, festoons, and what-not. These are nearly always useful, but they are often scattered about in a disorder that is not pleasing. It would be well to throw away what is not needed, and arrange the remainder neatly.

At the bureau of mines, in the state capitol, a neat style of mounting minerals has been adopted. Each specimen is placed on a base of soft pine, or of some inexpensive wood, of uniform size, with sloping sides (a truncated pyramid), on which a small label is pasted. One might be easily made with a good knife. (Fig. 1.)

The Japanese, who have many good ways of making a room pleasant, keep most of their bric-abrac in chests or cases away from sun and dust. These things are taken from their places when shown to visitors, or they are displayed in the room for a short time. For example, a piece of lacquer, or a painted panel, is taken from its tidy receptacle and appropriately placed where it best pleases the occupant of the room. The next day a new beauty supersedes it.

From what I know of Japanese rooms, I think them a trifle bare. There is very little furniture of any kind in sight, and the decorator has a great opportunity to use the most delicate ornament without fear of losing it in a maze of other things. This very idea is the great secret of many beautiful effects. I mean simplicity. Delicacy and simplicity are the beauty and strength

of ornament. How much more attractive is a single rose in a vase than a great cluster! The flower seems to be an individual with a whole beauty of its own—surely enough to please, more

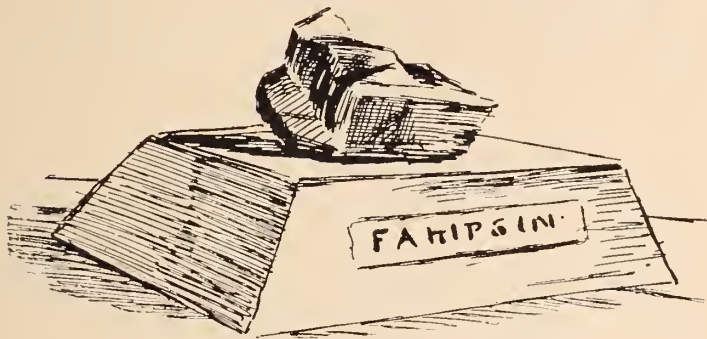


Fig. 1.

than a confusion of different blossoms. I never see a single flower on a desk without admiring it and wishing to caress the short-lived beauty.



Fig. 2.

Profusion is often a badge of vulgarity; and, in the case of the flower, there is no chance for it to tell you its story.

PICTURES.

Now, I shall come closer to things which can be measured. If you fear that you will do the wrong thing in selecting pictures, keep to the low-priced photographs of well known good things:

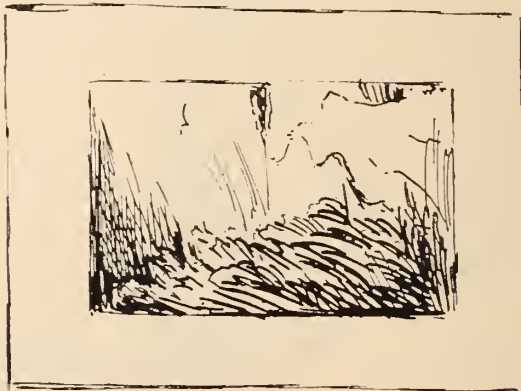


Fig. 3.

Famous pieces of sculpture, such as Angelo's "Moses," or Bayre's "Lion"—masterpieces of the great painters. Representations of noted buildings are always a safe investment. Dealers in these

things sell such prints for very little money. If photographs are bought in scrap form, that is, unmounted, they will be found very reasonable, and you can learn how to mount them. From the magazines and many advertisements, a great gallery of very good (and very bad) pictures may be cut and mounted on boards of various weights and colors.

BOARDS OR PAPER STOCK FOR MOUNTING.

Gray is usually the best ground for color, and is often best for black and white prints. Most paper stock is made 22x28 inches, and for walls is seldom cut. The sizes vary, however, and can be easily trimmed at your local print shop. I said that gray makes a good background for color. Later I will try to explain more about color. Manilla or buff yellow cardboard is very good for black and white prints, but I use shades and tints of gray more than manilla. A light-color cardboard becomes old, soiled, and faded too soon. In mounting a print, either in black and white or color, it is best to trim off the white margin before mounting. Do not be afraid to place it on a large sheet of cardboard. Let me show you what I mean (Fig. 3):

"A" gives a better view of the picture.

TIMIDITY AND LACK OF CONFIDENCE.

You must not be afraid to do things. Therein lies the whole trouble. People relegate fine art to the learned societies, to geniuses, and to persons of "culture" and leisure. I believe that, with a clean heart and a firm purpose, you can not go far wrong in art or in anything else.

A short time ago I asked a fifth grade to consider this subject, that we might get at the meaning of the term "fine art." We had talked together perhaps ten minutes, when one little girl said that she thought she knew the meaning. She said: "It is the doing of something one loves to do and doing it well." I sometimes wonder that children do not grow up in this happy way into art-loving men and women.

No, you must not be timid and afraid to do. Many persons will find flaws in your work (and in that of Millet and Raphael and Phidias), for reasons in human nature with which you are acquainted. They talk of hideous wall paper, oppressive

rooms, inharmonious effects, tones, values, and much else of which they know very little—indeed, no one knows these things very well. You should fear to become like them: to be gazers and talkers instead of workers.

PERSONALITY AND INTEGRITY.

Do not ape "culture" in this matter. Artistic products will impress you and appeal to you. Be responsive. In a lecture before the Harvard students, Henry Irving said concerning oratory: "You imagine that you would be like Daniel Webster; but remember that he was not great because he was like other great men. I tell you, be like yourself."

COLOR.*

There are a few simple facts concerning color which may be of use to you. Here is a diagram (Fig. 4) showing the relation of pigment hues as the artist uses them. The artist uses many names for nearly the same colors, and these names are confusing. The colors directly opposite are called complementary. For example, orange is the complementary of blue and of olive, but many subtle harmonies are on the verge of discord, and when we remember that the greatest colorists knew nothing of the science of color, as such, we do not need to pin our faith too closely.

Red and green are complementaries, but in pure hues they are very difficult to use in decoration. Only the masters have used bright colors successfully, yet when William Hunt painted the Albany dome he found it necessary to use the most brilliant hues in portions of the wall where a window let in a flood of light that made his wall as black as a silhouette against the sky.

COLOR AS IT SEEMS TO AFFECT US.

Red is a warm color—an exciting one; it remains stationary as to distance.

* There are many books on this subject. Milton Bradley publishes popular little books, but they are not sufficient for one who wishes to study the matter.

Church wrote a good short treatise.

We can not stop for a treatise on color in this small sheet. I advise you to study the second diagram for color harmonies rather than the first, and to remember that in a school room where children are faced directly toward one wall, it is wise to avoid obtrusive colors.

Blue is a cold color—it appears to recede from the eye.

Yellow is the color most nearly allied to light—it appears to advance toward the spectator.

At twilight blue appears much lighter than it is, red much darker, yellow slightly darker. By ordinary gas light blue be-

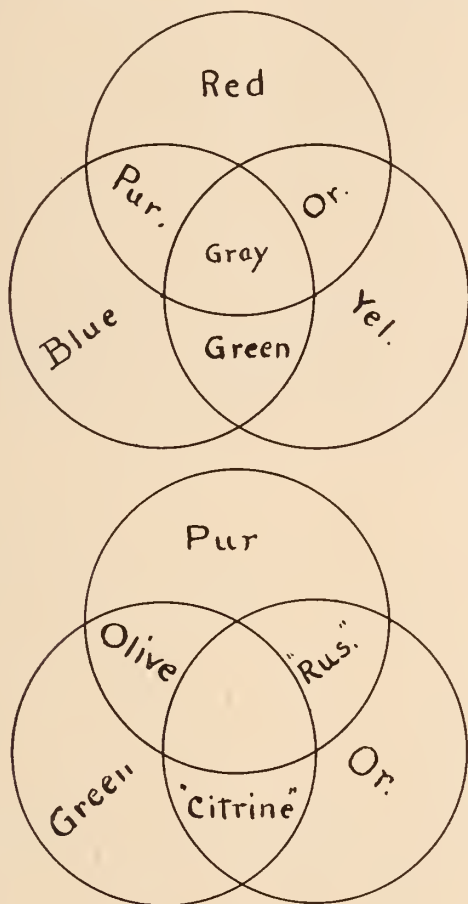


Fig. 4.

comes darker, red brighter, and yellow lighter. By this artificial light, a pure yellow appears lighter than white itself, when viewed in contrast with certain other colors. By certain combinations, color may make glad or depress, convey the idea of purity, rich-

ness, or poverty, and in many ways there is a close resemblance to music in its effect on the mind.

When a color is placed on a gold ground, it should be outlined with a darker shade of its own color.

When a gold ornament falls on a colored ground, it should be outlined with black.

When an ornament falls on a ground which is in direct harmony with it, it must be outlined with a lighter tint of its own color. Thus, when a red ornament falls on a green ground, the ornament must be outlined with a lighter red.

When the ornament and the ground are in two tints of the same color, if the ornament is darker than the ground, it will require outlining with a still darker tint of the same color; but if lighter than the ground, no outline will be required.

Black, white and gold are neutral in their relation to color. This is the case, although many would suppose that gold is a yellow. Gold will act as a yellow, but it is generally employed as a neutral in decorative work. Groups are often neutral. The artist frames his picture with gold, because the gold, being a neutral, does not interfere with the colors of his work. Neutrals are useful in separating colors when necessary or desirable.

Ceiling	Buff	Ivory	White or Ivory	Blue tint
Cornice				Buff
Frieze				
Picture mould				
Wall	Gray, light green or Olive	darker Buff	light gray with tint	Orange tint
Blackboard	Russet	Olive	dark gray with tint	black board
Wall				
Door				
natural wood				

Fig. 5.

CONTRAST.

When a light color is juxtaposed to a dark color, the light color appears lighter, and the dark color darker.

Colors placed together become influenced as to their hue. Thus, when red and green are placed side by side, the red appears redder than it actually is, and the green greener; and when blue and black are juxtaposed, the blue manifests but little alteration, while the black assumes an orange tint or becomes "rusty," because the orange (complementary of blue) is created in the eye and is cast on the black.

There are, however, rare harmonies and beautiful effects in color that are difficult to understand and frequently lie close to the verge of discord. (From Dresser's *Decorative Design*, London.)

Now, let us try to decorate your school room.

I prefer cool tints, such as one may buy in prepared kalsomine. If your room is very light, and has an exposure to the sun, your tints should be blue or green.

Green in a tint almost gray is good, because any bright thing like a carnation or a rose will show itself at once, and you need have little fear of reds which give so much trouble in a school room. Red will work havoc if it once "gets loose" in a room—beware of it.

Green, russet, buff, and olive tints are less likely to escape your control. They are not too cold, and do not tire the eye.

Fig. 5 gives several color schemes. They are suggestions only.

BLACKBOARD DRAWINGS.

A few designs are shown in Figs. 6, 7, 8, 9, 10, 11, 12, 13-25.



Fig. 6.

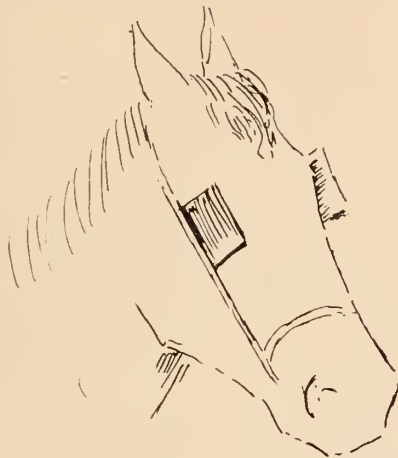


Fig. 7.

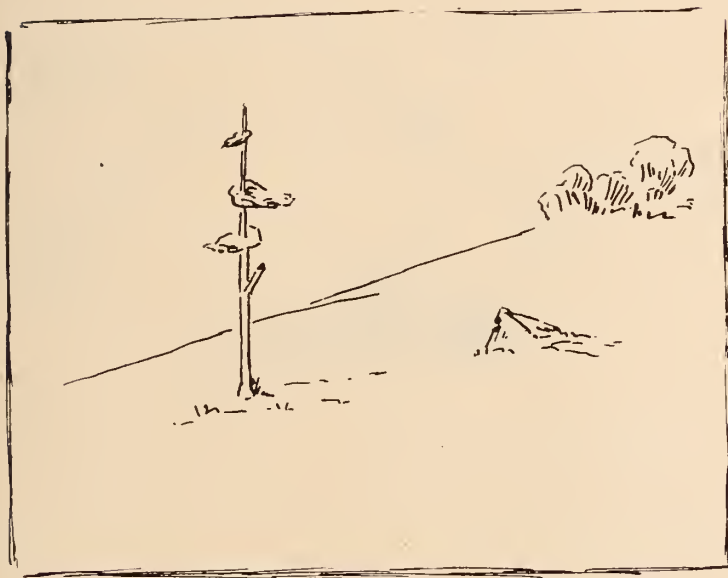


Fig. 8.



Fig. 9.



Fig. 10.



Fig. 11.



The mountains

Fig. 12.



The Ocean

Fig. 13.



Fig. 25.

PLASTER CASTS.

Small casts cost very little. I buy nearly always from P. P. Caproni & Bros., Newcomb street, Boston, Mass. They have a beautiful catalogue, which is a good thing to have in a library.

If you place an ivory tint plaster cast against a green or cardinal red crepe paper, you will be pleased with it. One or two casts will be enough for a small school-room.

GENERAL ADMONITIONS.

Don't place a good picture where it can not be seen—too high, or in a dark place.

Don't crowd a wall space, when one good picture, well placed, will fill a wall.

Keep your pictures and scraps in portfolios, where they will not be torn or crumpled.

Keep your blackboards clean.

Be careful with gaudy things in a school room, whether they are in color harmony or not. Gorgeous harmonies are dangerous.

Don't be discouraged, but remember that, in fine art, there is more missionary work to be done in the United States than in darkest Africa.

Sir Joshua Reynolds describes two men of his time who, each in his peculiar way, had dressed and decorated himself in the manner of his habit and choice, and he supposes them to meet each other. One is a European, the other a Cherokee Indian. "He who laughs at the other first," says Sir Joshua, "is the barbarian."

Do what you can, and try to be happy. Don't worry over what people say.

BOOKS.

Have books in a place where they may be seen, but may be shut off by a curtain. I might draw numberless designs for acknowledged that there was nothing to distract the attention bookcases, but that is done very well in countless books and magazines.

For titles of books treating of decoration, apply to the Colorado Library Association: Herbert E. Richie, secretary, City

Library, Denver; A. E. Whitaker, president, C. L. A., Boulder, Colorado; John Cotton Dana, Public Library, Denver, or Joseph F. Daniels, State Normal School, Greeley, Colorado.

DRAPERIES.

Draperies are used for covering walls, blackboards, door openings, and in many other ways. At the State Normal School, we have used more than a hundred yards for our model school-rooms. The common burlaps may be bought in a variety of colors and designs, while qualities vary from the ordinary "gunny sack" up. You can buy draperies in Denver, from the large dry goods and decorators' shops. The Richter Manufacturing Company, of Tenafly, New Jersey, carries a most complete line.

PORTFOLIOS.

Get a "tar-board" or "cloth-board" and bookbinder's canvas, enough to make two or three good sized portfolios. (Fig. 14.)

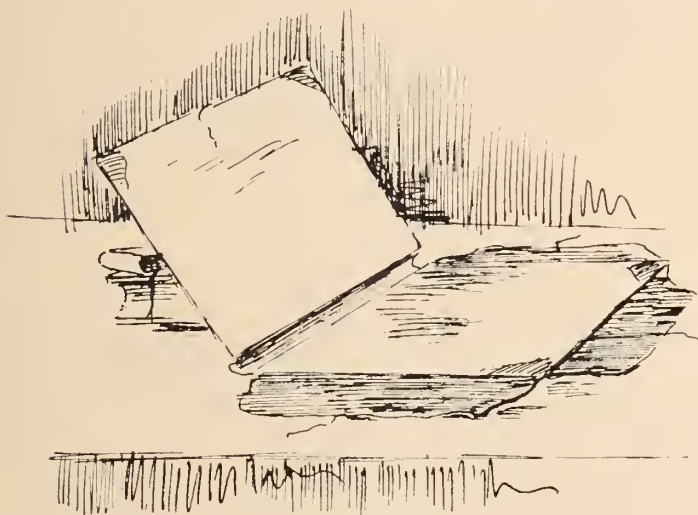


Fig. 14.

Lay two pieces flat (Fig. 15), and use the canvas with library paste or glue. Mucilage will not do the work. Pure dextrin from the druggist's, library paste, and glue are best. Keep free

from dust, and cover the paste with water when not in use. Keep the brush clean and do not allow it to dry hard.

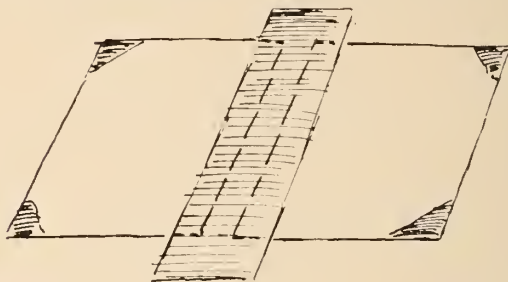


Fig. 15.

Most pictures can be mounted by "tacking" four corners. "Tacking" is simply leaving a small point of paste on the material in order not to stick the whole picture. Pictures "tacked" in this way may be removed from one cardboard to another; from a dark green or a manilla background to a gray, for example.



Fig. 17.

EXHIBITIONS.

Of course, you have days when you display your work—days set apart for parents, for graduation, or some other celebration—days when you expect the superintendent, and you wish to have things where they may be seen to advantage.

A frame, or several frames, not over seven feet high and three or four feet wide, can be covered with burlap and arranged, either against the wall or to be used as walls, where they get good light. Small show-card pins which stick into the cloth and hold cards and drawings are the best things to use in attaching pictures to this surface. You can hang small booklets in this way, take them from the frame for examination, and stick them up again with very little trouble. They are more easily seen than on a table. The screens or frames can be used for other things, or easily stored one against the other in very little space.

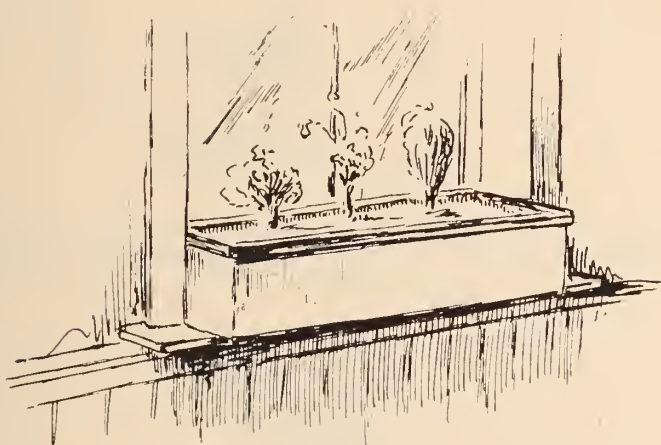


Fig. 16.

PICTURE FRAMES.

Good pictures are often spoiled by frames. The cardboard is much better for many reasons; it costs little, it can be put away easily, it does not accumulate dust and dirt, and it gives you a wider mat for color ground.

When large pictures need framing for permanent wall positions, they should be framed with care and sealed at the backing board. If the glass fits the rabbet, and the back is carefully sealed, the picture is practically tight as regards dust. If you have small pictures to frame, use a narrow polished bead of natural wood or dark stain—a brown, nearly black, is best.

There are many kinds of mats to be used, with or without glass—white, gray, dark green, and moss green. The dark green is nearly black.

If you have a good oil painting, put it in a "gold" frame, wide and deep, and do not use a mat.

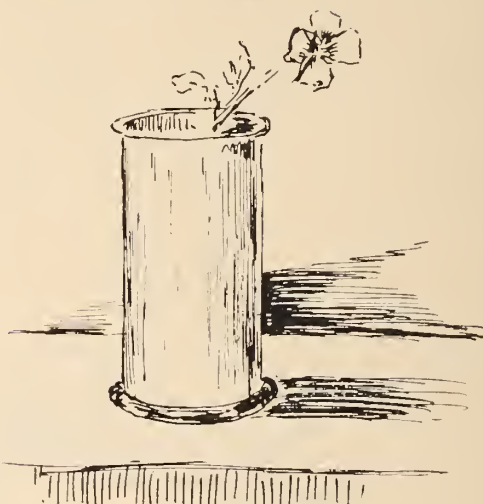


Fig. 18.



Fig. 19.

A water color drawing or reproduction is at advantage in a light-weight frame of gold, or wood with a gold bead, and a cold gray, blue, or green mat.

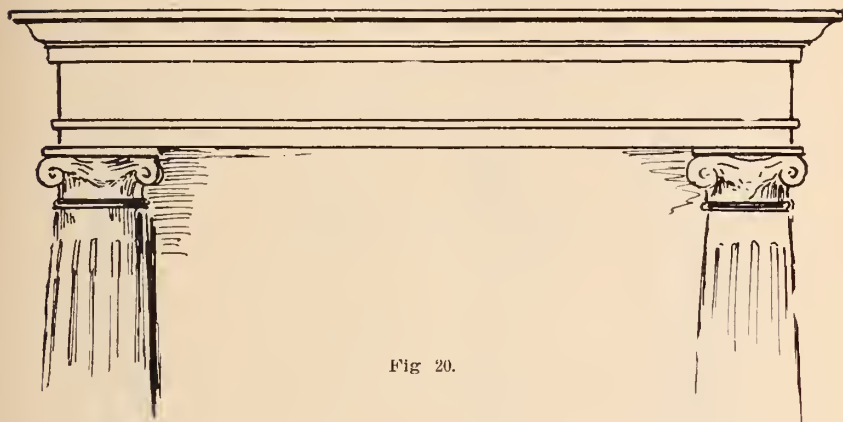


Fig. 20.



Fig. 21.

P R O G R A M			
OPENING	9.—	DRAW.	1 30
ARITH.	9 ¹⁰	READ.	2 15
STUDY	9 ⁴⁵	STUDY	2 30
RECESS	10 ¹⁵	RECESS	3 00
GRAM.	10 30	HISTORY	3 15
WRITING	11 ¹⁵	DISMISS	4 00
GEOG.	11 30		
DISMISS	12 ¹⁵		

Fig. 22.

PROGRAMMES.

Some teachers use a blackboard programme. Three simple designs are shown. (Figs. 20, 21, 22.)



Fig. 23.

VASES AND FLOWER BOXES.

In the large cities you can buy beautiful vase forms, in gray or in red clay, or in many glazed decorative designs. I have purchased three imported vases of excellent workmanship for \$1.50. The dealer wished to sell them cheap, as he had carried them for five or six years, and had had no call for them.



Fig. 24.

The fragile porcelain vases are apt to be broken in a school room, and are too expensive. The white china vase may be a



Fig. 26.



Fig. 27.

very good utensil, but it is not usually beautiful. Mugs, cups, and tumblers will hold flowers, but a good vase costs only a little more, and is incomparably better.

WINDOW GARDENS.

Flower pots will tip over and drop on the floor and break, scattering the contents. They look very pretty when covered with crepe paper, but a flower box is better. A flower box ought to be lined with metal, and a tile covering makes it an ornament in the school room. However, if you have only a wooden



Fig. 28.

box the right shape for your window sill, you can give it a good priming coat of paint or lead and finish it in any color you please. I have made a drawing of such a flower box (Fig. 16), which is made of inch and a quarter boards. A few vase forms are given, also. (Figs. 18, 19, 20, 21, 22, 23, 24.)

POVERTY.

There are times when a teacher, or school board, feels very poor, and it may be that for the present you are unable to buy any paint, portfolios, draperies, vases, plaster casts, bookcases, or any other things that you might like to have. I know of sev-

eral school rooms which suffer in this way. In such a case, you can have one pleasure—the great pleasure of planning what you

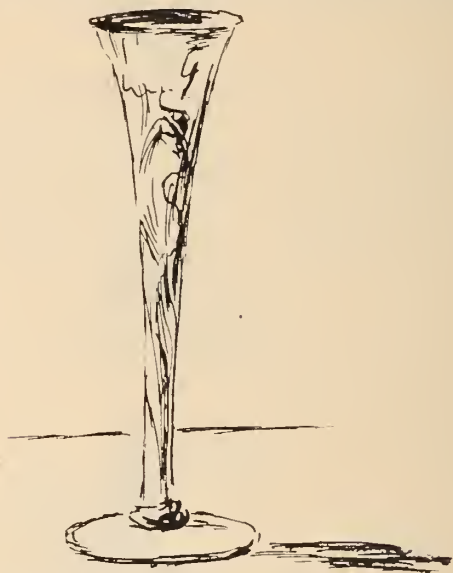


Fig. 29.

will do when you become rich. Olive Shreiner says that, if you dream faithfully, your dreams will come true, and it may be



Fig. 30.

that, with much thought on the matter, you will be able to change your conditions.

ENVOI.

Do not be afraid. Be in earnest, and be happy.

JOSEPH F. DANIELS.

MODEL SCHOOL ROOM.

Four thousand visitors were attracted to the model school room opened carnival week, in the state capitol, by Professor Grace Espy Patton, superintendent of public instruction. The model school room was arranged as a means of showing what could be done in the way of artistic decoration. Under the direction of Joseph F. Daniels, librarian of the State Normal School, a large apartment on the second floor was made beautiful with a slight outlay of money, supplemented by a great deal of ingenuity and good taste.

Single desks of the most approved pattern were placed in position, twenty-four being regarded as the greatest number that should be needed in an ideal school. The room was lighted from the top, olive shades screening the lower sashes of the windows. Above the slate blackboard hung an olive wall drapery drawn smoothly and used as a background for some photographs of Greek statuary and great paintings. These photographs, as well as nearly all the other pictures employed, were unframed and mounted upon cardboard, grays, browns and dark greens being selected. Square boxes, over which burlaps were carelessly thrown, served as pedestals for the display of artistic vase forms and Japanese jardinieres. Framed engravings of Washington, Lincoln, Emerson, and Longfellow faced the desks. Bookcases occupied spaces at the sides of the room. Busts of Shakespeare and Froebel looked down from the top shelves, above which hung strips of beautifully colored and embossed burlap. A Japanese screen hid one unsightly corner. Maps and charts, in polished wood cases, were surmounted by plaster busts, which were thrown out in sharp relief by the backgrounds of crepe paper. In the door openings, portieres of olive ticking fell in heavy folds.

Pictures were everywhere generously used. These pictures were of all styles that represent the best in contemporary art.

and were cut from magazines. They were mounted on cardboard and pinned to the olive or terra cotta draperies.

The effect of this room was warm and inviting. There was a repose in its furnishings that was conducive to thought concentration. The most observant teachers who looked it over of pupils.

The interest manifested by the children was of much significance. Fully one thousand boys and girls visited the model school room. They were most enthusiastic in their praises, and they showed more appreciation than any other class of sight-seers. In many cases they called several times, returning with their parents, from whom they compelled a careful examination of every part of the decorations. Although costly vases and fragile busts were displayed within the reach of the smallest spectators, nothing was broken or roughly handled. This fact should certainly silence all school directors and unsympathetic taxpayers who still persist in believing that a vandal spirit rules young America.—Colorado School Journal, November, 1897.

DIRECTORY—MATERIALS AND DEALERS.

CARD BOARD AND PAPER STOCK.

Silver gray, 10-ply.
Warm gray.
Cold gray, linen cover.
Cold gray, 3-ply bristol.
Dark gray or slate, 8-ply railroad.
Maroon, show-card.
Silk green, show-card.
Manilla, extra heavy.
White, 10-ply Phoenix, No. 1 blank.
Cream, 18-ply, Ætna, pasted.
Cardinal, thick china.
Tea, 6-ply railroad.
Tar-board.
Cloth-board.
Sizes vary.

Dealers.

Warren & Walker, Denver.
E. A. Peters (wholesale), Denver.
Carter, Rice & Company (wholesale), Denver.
Geo. D. Horne, Greeley.
E. B. Coulter, Greeley.
Or your local print shop.

CASTS, PLASTER.

The list of subjects is very long and ranges from the Melos Venus to Abraham Lincoln, and from Donatello to Baryé.

Dealers.

Warren & Walker, Denver.
They are selling agents for Caproni, Da Prada and Hennecke.

COLOR SCALE AND STANDARDS.**Dealers.**

Milton Bradley, Springfield, Mass.
Prang Ed. Co., Boston, Mass.

DRAPERIES.

Burlap—plain or figured.
Denim—in colors.
Ticking—in colors.

Dealers.

Richter Mfg. Co. (wholesale), Tenaflly, N. J.
T. H. Miller, 1647 Champa street, Denver.
Joslin Dry Goods Company, Denver.
R. H. White & Co., Boston.
Jordan, Marsh & Co., Boston.

HOOKS AND PINS.

Ticket pins.
Show-card hooks; and other devices for displaying material.

Dealers.

Colorado News Company, Denver.
Denver Art Store, Denver.
Dennison Mfg. Co., Boston or Chicago.

JAPANESE GOODS.

Screens.
Vase forms.
Lanterns.
Furniture.
Drawings.
Fans; and many pretty odds and ends.

Dealers.

Warren & Walker, Denver.
Joslin Dry Goods Company, Denver.
Denver Art Store, Denver.
Colorado News Company, Denver.
Vantine's, Broadway, New York.
Bunkio Matsuki, Boylston street, Boston.

LANTERNS.

See Japanese.

PAINT, KALSOMINE, ETC.

You can buy paint without directions. "Alabastine" comes in very convenient packages and in a great variety of colors for those who do not wish to mix the material; it is a good thing; it comes in dry powder, with directions for easy mixing.

Dealers.

Alabastine Company, Grand Rapids, Mich.

KALSOMINE RECIPE.

"Take twenty pounds whiting to one pound of gelatine glue. Dissolve whiting in water and add dry color (from any paint shop) until desired tint is obtained. Mix well together. Put glue in tin vessel; cover with water; let it come to boil and thoroughly dissolved. Then pour into the whiting; mix well and apply when cool."

The amount may be regulated according to the wall space. I think that a five-pound mixture would cover a room 12x14, 9 feet high.

Mr. T. H. Miller, of Denver, does this sort of work, and furnished the recipe.

The New York Wall Paper Co., 1642 Lawrence street, Denver, has a wall preparation which is applied in nearly the same manner as "Alabastine"—with cold water. It is called "Occidental Wall Finish." These dry mixtures cost 7 or 8 cents a pound.

PASTE, GLUE, ETC.

Sanford's library paste, in tubes or bottles; all sizes.

Le Page's liquid glue.

Dextrin (at any drug store).

PICTURES.

Copley Prints, and many other reproductions. Copley prints are expensive, but they are wonderfully well done.

Soule Photographs.

Berlin Photo. Co. prints.

Art Amateur prints.

Art Interchange.

Dealers.

Warren & Walker, 805 Sixteenth street, Denver.

Kelley & Westling, Denver.

Educational Publishing Company, Boston.

Houghton, Mifflin & Co., Boston.

The Maison and Braum Co., 257 Fifth avenue, New York.

STATUARY.

See Casts.

STENCILS.

Get sample sheet from dealers, or make them yourself.

Dealers.

T. H. Miller, Denver.

B. L. James Company, Denver.

TILE.

To furnish a box 30 inches by 6 inches by 6 inches, in plain enamel, with choice of color, \$2.10; embossed, \$2.65.

Dealers.

Denver Mantel and Tile Company, 1609 Court Place.

VASES.

Bohemian glass (Fig. 22).

Wedgewood (Fig. 26).

Glazed ware.

American ware is quite expensive and very good (Rockwood, etc.). Japanese ware is very good and very cheap. (Figs. 2, 17, 20, 21, 23, 24.)

Dealers.

Vantine, 877 Broadway, New York.

Colorado News Company, Denver.

Parkinson & Wallace, Denver.

Fred Fezer, Greeley.

Geo. D. Horne, Greeley.

E. B. Coulter, Greeley.

MANUAL TRAINING FOR EIGHT YEARS.

INTRODUCTION.

Modern education requires that, in addition to being able to know, the pupil must be able to do. When the time comes for the adoption of a measure, to argue in its favor is not necessary in Colorado, inasmuch as the educators and other citizens are quick to recognize the importance of the newest and best methods of instruction in the public schools of the state.

At the annual meeting in 1896, of the council of the Colorado State Teachers' Association, a committee, consisting of Dr. Z. X. Snyder, president of the State Normal school; Professor James H. Van Sickle, superintendent of the North Denver schools; Professor William H. Smiley, principal of the East Denver high school, and Mrs. Thalia A. Rhoads, superintendent of schools of Arapahoe county, was appointed for the purpose of devising means whereby the state course of study might be enriched and improved.

This committee, after conferring with the Superintendent of Public Instruction, in February, 1897, was of the opinion that the introduction of manual training into the district schools and grades should be encouraged; and to issue a bulletin upon the subject was regarded as the most effective method of accomplishing the result desired.

The department of public instruction, recognizing the importance of presenting the subject to every county and district school official, as well as to every teacher in the state, takes pleasure in sending this bulletin forth upon its mission of providing a practical text book on the subject of manual training, a text book that may be placed in the hands of every educator in the state, and used to advantage by any teacher and in any school.

The committee appointed by the council represents the most progressive educators of the state, and the members have la-

bored conscientiously that their efforts might be in the right direction and result advantageously in raising the standard of the educational system of Colorado.

Mr. Charles M. Carter and Mr. Giles F. Roosevelt, of the North Denver schools, have given their time, their energy, and their best thought to the preparation of the subject and illustrative matter of this bulletin. The high standing of these gentlemen in their profession is such as to serve as a recommendation for any work of an educational character that may be issued in their name or that may bear the stamp of their approval.

GRACE ESPY PATTON,
Superintendent of Public Instruction.

March 24, 1898.

PREFACE.

The aim of this pamphlet is to present the main features of a course of instruction in manual training for eight years, commencing with the entrance of the child into our public school. The arrangement shows a logical distribution and progression of exercises such as are commonly agreed by educators to be suitable for the different grades. Some appeared originally in connection with drawing, sloyd, etc.; all are here arranged as parts of a course in training which exercises minds, hands and eyes, and for convenience is nominated "manual training." The matter presented shows the instruction of to-day in the North Side schools, Denver, Colorado. The plates of illustration are without exception photographic reproductions of work performed by children, while the interior views show classes as they appear during the lessons. The authors are greatly indebted to several teachers of the North Side schools for their painstaking care and taste in arranging the children's work from which the illustrative plates were made. Practically, the reader may consider himself as inspecting a school exhibition accompanied by explanations. It has not been possible to enter very largely into details; the general directions, however, will help to a clear understanding of the most important features of a course of instruction. It is not claimed that any new ideas are given, but rather that the graphic character of the presentation will make the requirements of a course of instruction easily understood.

Throughout the course of instruction every possible opportunity is taken to stimulate the inventive and creative faculties. Special stress is laid upon beauty of form and proportion. In

many exercises main dimensions only are given, and the pupils devise the details under the direction of the teacher. For example, in the third year, plate 17, the decorations of the baskets were originated by the children; further, it will be observed that the wall-pockets have the same general proportions while the details show modifications designed by the children. Similar opportunities are shown in the objects made of wood in the higher years. Variations from set exercises are quite possible with pencil sharpeners, calendar backs, match safes, etc. Such exercises stimulate the interest of children greatly.

It is hoped that this pamphlet will assist in the more general introduction into our schools of that kind of instruction possessing the threefold advantage of training mind, hand, and eye.

THE AUTHORS.

FIRST YEAR.

MODELING.

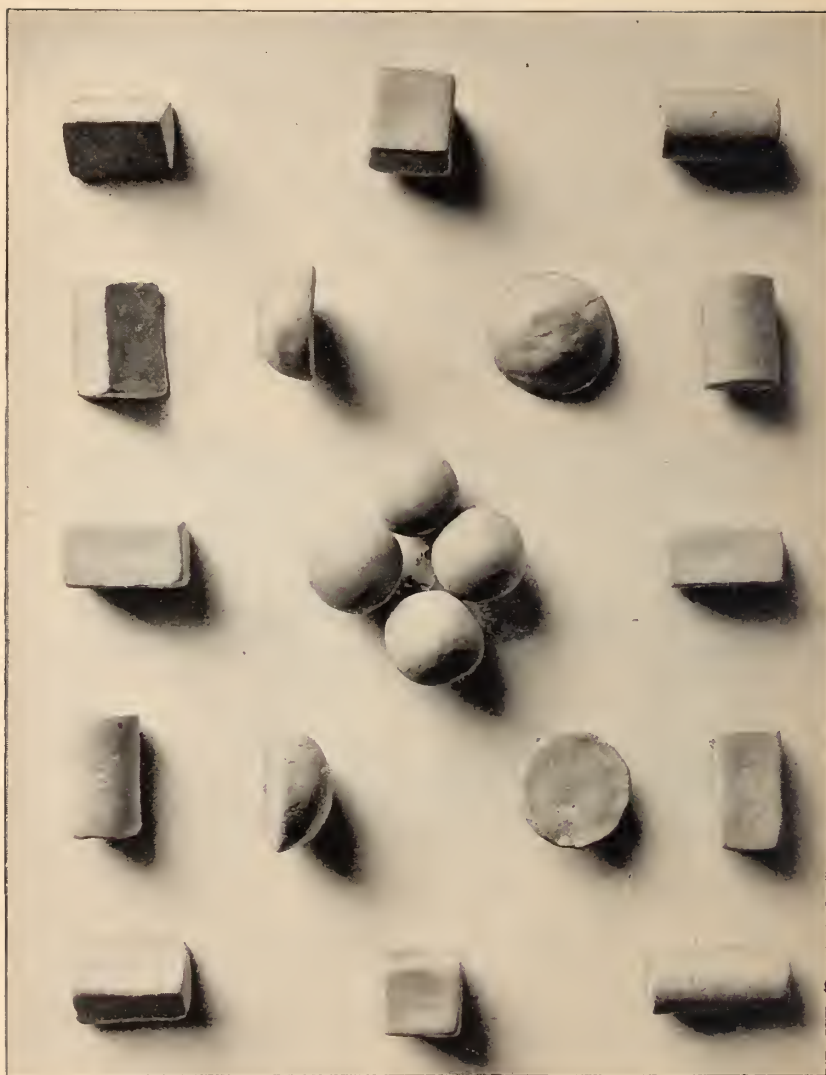
The work of this year is arranged on the supposition that pupils have studied objects about them, both natural and artificial; that they have been led to compare and classify their



forms, and to see that many of them are more or less related to elementary geometric forms. These forms, then, together with natural forms, become subjects to be expressed by means of clay, paper, cardboard, etc. The geometric forms or "type solids" particularly considered and modeled are the following. See plate 1:

- Sphere.
- Cylinder.
- Square prism.
- Cube.
- Hemisphere.
- Right-angled triangular prism.

PLATE 1—FIRST YEAR.



TYPE SOLIDS MADE OF CLAY.

In connection with the above models, common objects like the following; based on the sphere, marble, apple, return ball, etc.; based on the cube, playing block, box, basket, etc.; based on the cylinder, bottle, rolling pin, box, spool, etc.; based on the hemisphere, bowl, hat, cap, etc.; based on the square prism, box, trunk, etc.; based on the right-angled triangular prism, a tent, chicken coop, etc.

Bodies combining the above solids may be modeled also. See plate 2.

EXERCISES IN PAPER FOLDING.

The following may be produced by folding pieces of paper five inches square. Each fold should be made in response to explicit directions from the teacher. All work to be done on the desk and not in the air:

Book.
Window.
Card case.
Hanging basket.
Fan.
Frame.
Shawl.
Roof.
Tablecloth.
Kite.
Soldier cap.
Card basket.
Boat.
Wall pocket.
Seed box.
Screen.
Handkerchief case.
Envelope.
Box.
Portemonnaie.
Card tray, etc.

Plates 3 and 4, reproduced from the work of children, show many of the objects mentioned.

PLATE 2—FIRST YEAR.



COMMON OBJECTS BASED ON TYPE SOLIDS, MADE OF CLAY.

CUTTING AND MAKING DESIGNS OF COLORED PAPER.

The first exercises may consist of arranging circles, semi-circles, squares, oblongs, and triangles provided by the teacher. They may be cut from stiff paper or purchased already cut. Subsequent exercises may require the pupils to cut these forms and afterwards arrange them.

PRINCIPLES OF DESIGN TO BE EXPRESSED.

1. Repetition; horizontally, vertically or radially. Examples, series of equidistant circles placed in rows vertically or horizontally, or regularly around one circle as a center piece.

2. Alternation. Arrangements similar to the above, except that there is an alternation of forms, as of squares and circles; or simply of position, as, first a square on its diameters, then another on its diagonals.

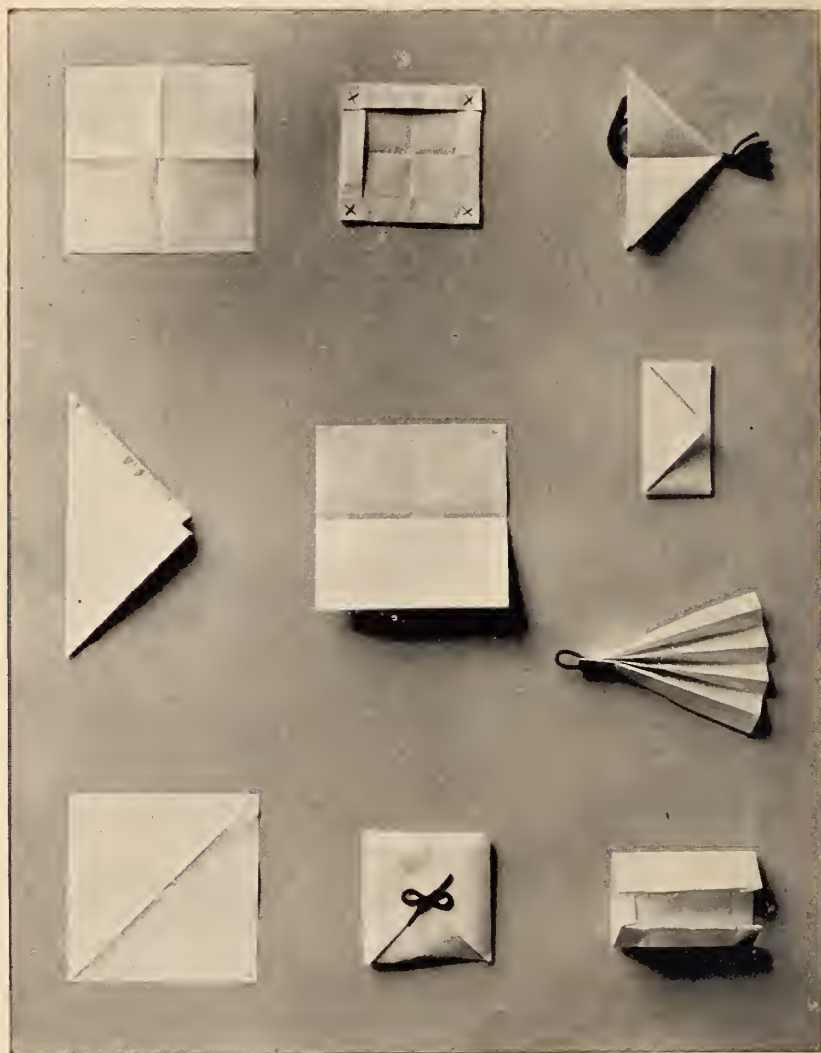
COLOR.

Some knowledge of color may be imparted in connection with the above exercises; in which event the papers should represent the "leading colors," viz., red, orange, yellow, green, blue and violet. Arrangements to consist of one color only. If it is desired to make permanent arrangements, the papers may be pasted on oblongs $3\frac{1}{2}$ inches by 7 inches, or 3 inches by 9 inches, for borders; or on squares 7 inches by 7 inches for radial designs. Gray cardboard makes the best background. Paste need not cover the entire back of the units, and should be spread very thin.

Plates 5 and 6 are reproductions of children's work done with colored papers.

Directions regarding similar exercises may be found in the primary drawing manuals published by The Prang Educational Company, Chicago; and Ginn & Company, Boston.

PLATE 3—FIRST YEAR.



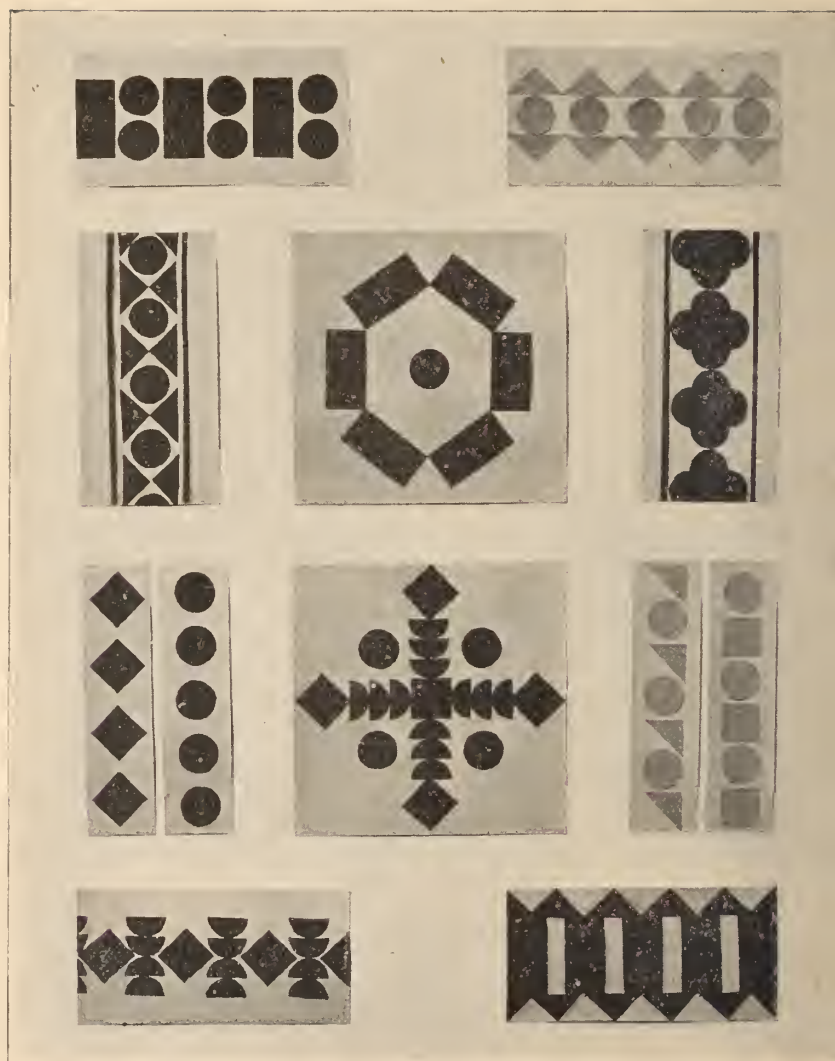
EXERCISES IN PAPER FOLDING.

PLATE 4—FIRST YEAR.



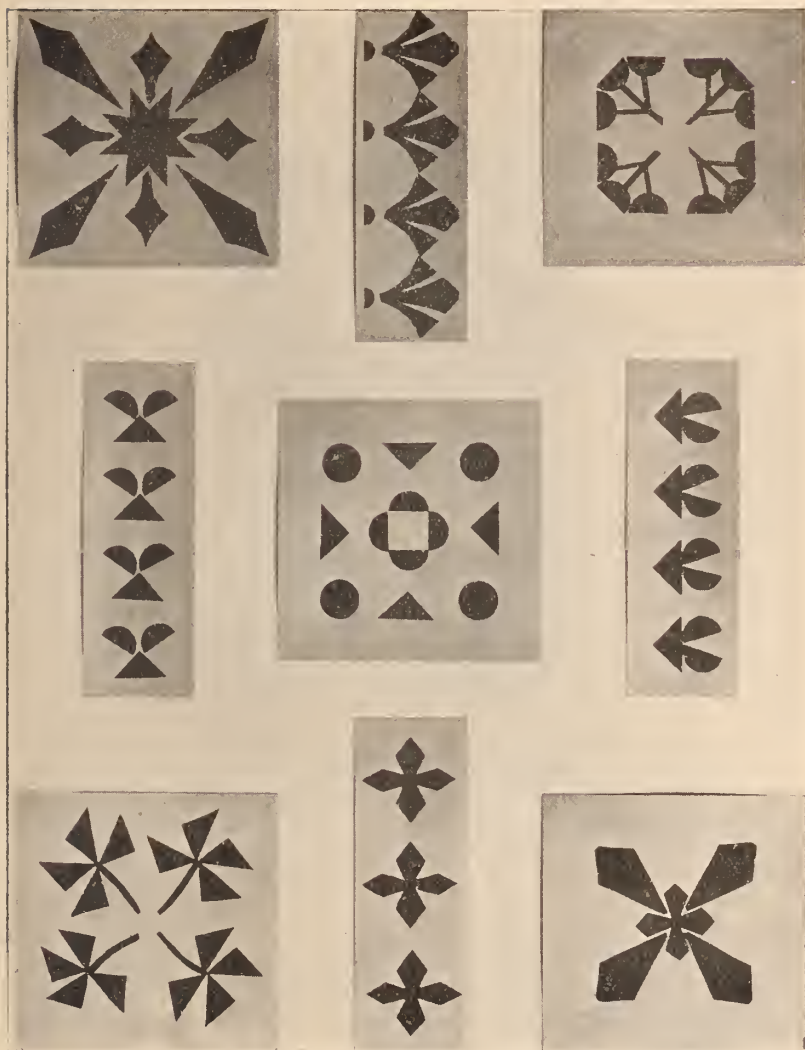
EXERCISES IN PAPER FOLDING.

PLATE 5—FIRST YEAR.



CUTTING AND MAKING DESIGNS OF COLORED PAPER.

PLATE 6—FIRST YEAR.



CUTTING AND MAKING DESIGNS OF COLORED PAPER.

SECOND YEAR.

MODELING.

As in the first year, the children continue to study the forms of objects about them. Incidentally they are led to discover fundamental forms like the following:

Ellipsoid.

Ovoid.

Equilateral triangular prism.

Cone.

Square pyramid, etc.

The above, together with common objects, are the subjects to be expressed by means of clay. Perfect expression is not expected. Be contented with the results if they present even a few of the most evident characteristics of the objects. Illustrations representing reproductions of children's work are shown in plates 7 and 8.

EXERCISES IN FOLDING.

Pupils who have never done any folding may advantageously do the exercises of the first year, to which may be added, folding quarter-inch hems, quarter-inch tucks, bias bands, etc.

CUTTING AND MAKING DESIGNS OF COLORED PAPER.

From the elementary forms modeled in clay we may derive the following which may be expressed by cutting paper:

Ellipse.

Equilateral triangle.

Ovoid.

Isosceles triangle.

The above, together with circles, squares, etc., of the first year, may be used to express the principles of repetition and alternation.

The plane figures already derived from solids may also be combined in the following crosses, viz.: Greek, Latin, Maltese, and St. Andrews.



They may also be combined to represent "patterns" of the following subjects. The pattern of the surface of the cube, for instance, is made by combining six squares:

Cube.

Right-angled triangular prism.

Equilateral triangular prism.

Square prism.

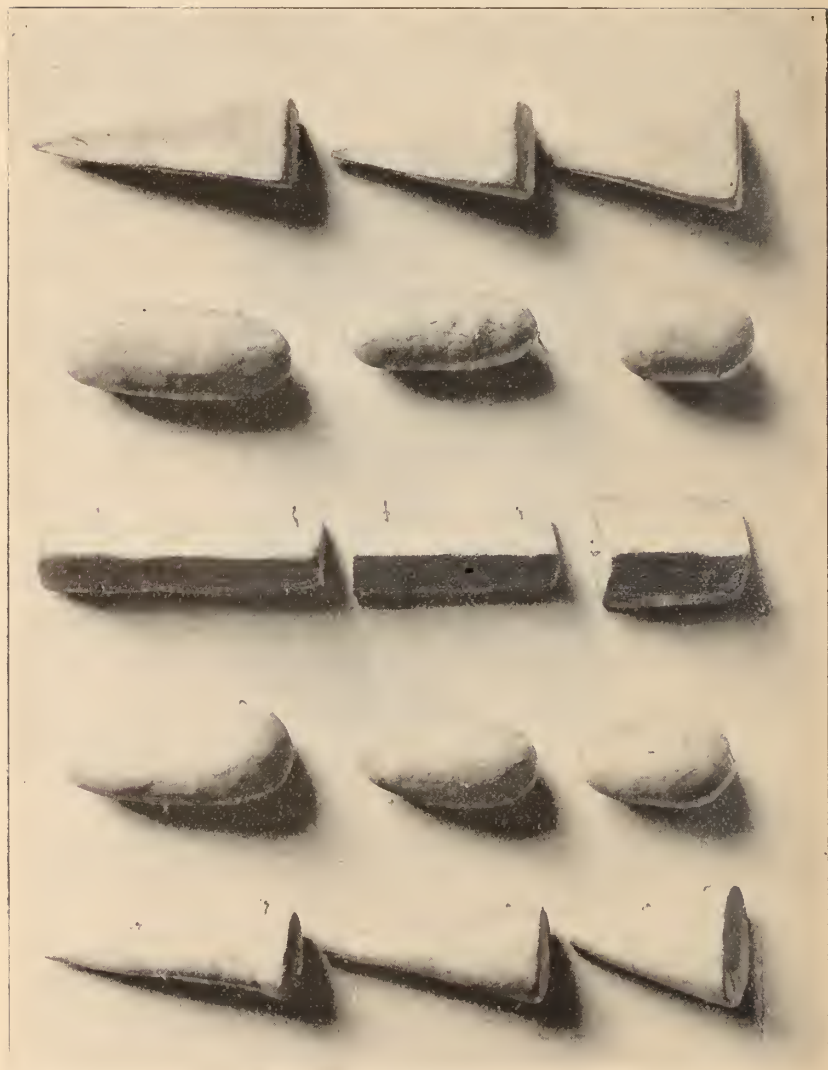
Pyramid.

See plates 9 and 10.

COLOR.

If colored papers are used they should consist of the "leading colors," viz.: red, orange, yellow, green, blue, violet and a

PLATE 7—SECOND YEAR.



TYPE SOLIDS MADE OF CLAY.

tint of each, viz.: light red, light orange, light yellow, light green, light blue and light violet. The colors to be used alone or a "leading color" with its "tint." For permanent arrangements follow the suggestions in the first year's work.

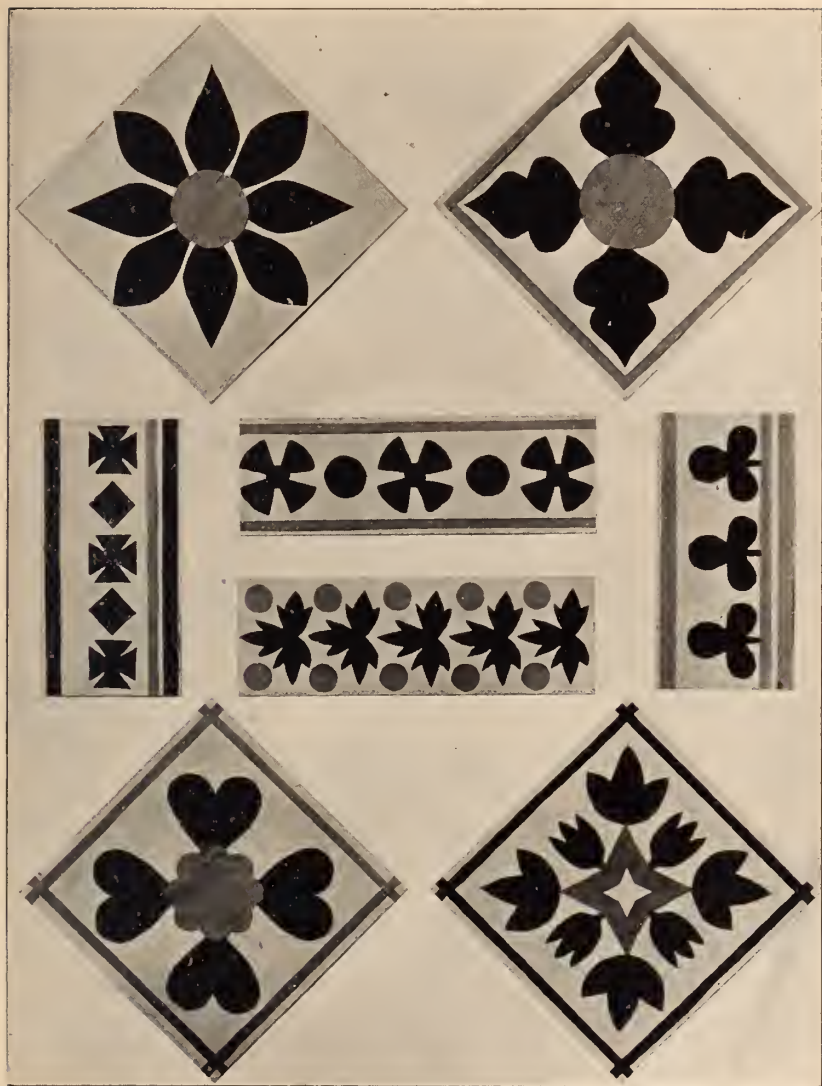
ADDITIONAL EXERCISES.

In both the first and second years, exercises with sewing cards, dried peas, etc., are useful in attaining the same ends. The carving of soap has also been successfully done in some schools. The exercises given, however, are fundamentally the most important.

PLATE 8—SECOND YEAR.



PLATE 9—SECOND YEAR.



DESIGNS CUT AND MADE FROM COLORED PAPER.

PLATE 10—SECOND YEAR.



DESIGNS, OBJECTS AND PATTERNS, REPRESENTED
BY COLORED PAPER.

THIRD YEAR.

MODELING.

The objects are modeled to a definite size. Greater exactness of expression is expected, so that while the objects are quite similar to those previously done, the pupil will be fully occupied in striving after more perfect expression. Objects similar to the following may be modeled:

Sphere, 2 inches in diameter.

Cube, faces, 2 inches square.

Cylinder, 2 inches diameter, 4 inches long.

Circular plinth, 4 inches diameter, 1 inch high.

Cubical or oblong box, from object.

Fruit and vegetables. See plate 11.

The following tablets may be made:

Elliptical tablet, 4 inches by 2 inches by $\frac{1}{2}$ inch.

Ovoid tablet, 4 inches by 2 inches by $\frac{1}{2}$ inch.

Hexagonal tablet, 3 inches diameter, $\frac{1}{2}$ inch thick.

Octagonal tablet, 3 inches diameter, $\frac{1}{2}$ inch thick.

Various objects essentially flat, like the following, are recommended:

A Greek cross, 3 inches diameter, $\frac{3}{4}$ inches thick.

A shield, $3\frac{1}{2}$ inches high.

A door plate, 6 inches by 2 inches by $\frac{1}{2}$ inch.

Simple figures from historic ornament, as the Egyptian star, or lotus may be modeled on panel backgrounds, $\frac{1}{2}$ inch thick, the ornament projecting about $\frac{1}{8}$ inch. Leaves and flowers may be placed on similar backgrounds. The making of letters of the alphabet on a panel background will interest children. In examples of this character, a pleasing effect may be produced by smoothing the surface of the figure or ornament, and roughing the exposed part of the background by making parallel scratches with anything having a sharp point. See plate 12. The sur-

face of the child's slate corresponds to that employed by sculptors in modeling panel forms. The work should rest upon it until finished.

Tools are not a necessity. A stick with either a rounded or flattened point will be of assistance occasionally. Narrow depressions as used in the name "Brown" are made with a rounded point.



CUTTING AND MAKING DESIGNS.

As in connection with modeling, greater truthfulness of expression is required; for this reason some of the first exercises may be similar to those given to the second grade. Afterwards, the elementary forms, i. e., the square, oblong, etc., may be modified in outline, and then used as before to express the principles of repetition and alternation.

If employing colored papers, use the suggestions in connection with the second year. Plates 13 and 14 illustrate arrangements in which the outlines of the elementary plane figures have been modified. The designs of both of these plates are on oblong or square mounts, of gray cardboard. The colors of the first and second years are combined with their tints and shades.

In making radial designs with modified isosceles triangles, the paper units may be used as patterns from which to cut cloth units (felt is best) which may afterwards be combined into penwipers as shown in plate 15.

MAKING SIMPLE OBJECTS OF PAPER—PATTERNS.

Lead the children to derive the patterns of cubes, oblong blocks, etc., from models. Ascertain the shape of the one piece of paper, which, with laps for pasting, will allow the construction of the model with paper or cardboard, definite sizes being required. The upper row of illustrations of plate 15 shows paper patterns. The next row shows the patterns pasted so as to form the following:

Envelope, $2\frac{1}{2}$ inches by $3\frac{1}{2}$ inches.

Pen tray, $3\frac{1}{2}$ inches by $\frac{1}{2}$ inch.

Match box, $2\frac{1}{2}$ inches high, $1\frac{1}{2}$ inches square, with projection above, $1\frac{3}{4}$ inches.

Square prism, $2\frac{1}{2}$ inches by $1\frac{1}{2}$ inches by $1\frac{1}{2}$ inch.

Cubical box, 2-inch faces, cover, $\frac{1}{2}$ inch deep.

Cube, 2-inch faces.

The paste or glue should be very tenacious. Spread very thin with a knife or tooth pick.

MAKING AND DECORATING CARDBOARD OBJECTS.

Plates 16 and 17 are photographic reproductions of objects made by children in the third grade. Plate 18 gives dimensions necessary for their construction. It will be observed that the fans consist of circles or ovoids of cardboard on which are pasted colored paper units representing designs by the pupils. The handle consists of a splint, such as is used in the kindergartens, attached to the cardboard by means of glue.

The picture frames are made of oblong pieces of cardboard from which the ellipse has been removed. It is drawn on the back of the cardboard previous to cutting. The units of decoration, as in all of the following examples are cut from appropriate colored paper and attached to the cardboard. Using the frame for a simple picture makes the result more pleasing to the children.

The lower row of illustrations of plate 16 represents a card case consisting of two oblongs of cardboard united by pieces of

tape, a peculiarity of the case being that it opens in two ways. The ends of the pieces of tape are covered by pasting over them two other oblong pieces of cardboard of the same size as the first. They become the outside covers, on which are pasted the decorations designed by the children.

Plate 17 represents the following:

A decorated basket.

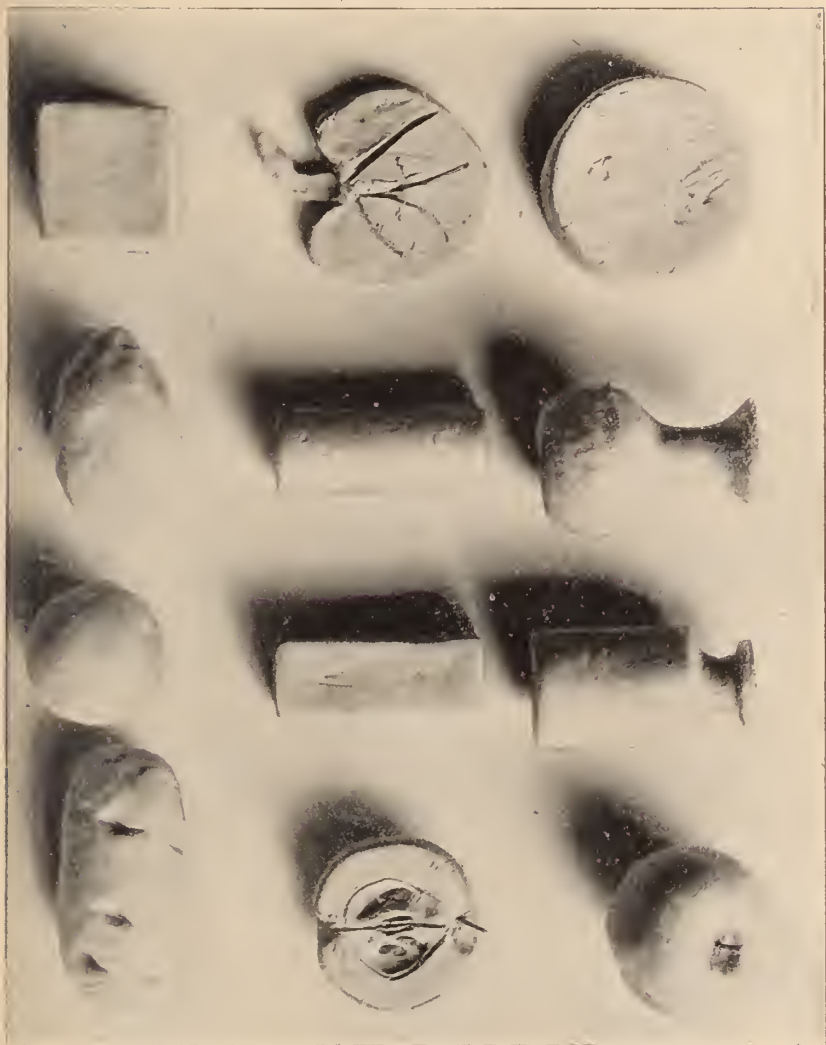
A decorated wall-pocket.

A quatrefoil window.

The various illustrations show the manner in which the fundamental forms have been formed and decorated. The cardboard is gray. The decorations white or colored. All necessary dimensions are given on plate 18. Perhaps it is unnecessary to add that the patterns are drawn directly on the paper or cardboard, and that as far as possible they are arranged to come on the inside of the object.

It should be stated that the third year work is deemed, as yet, experimental. The author would be glad to receive suggestions as to its improvement.

PLATE 11—THIRD YEAR.



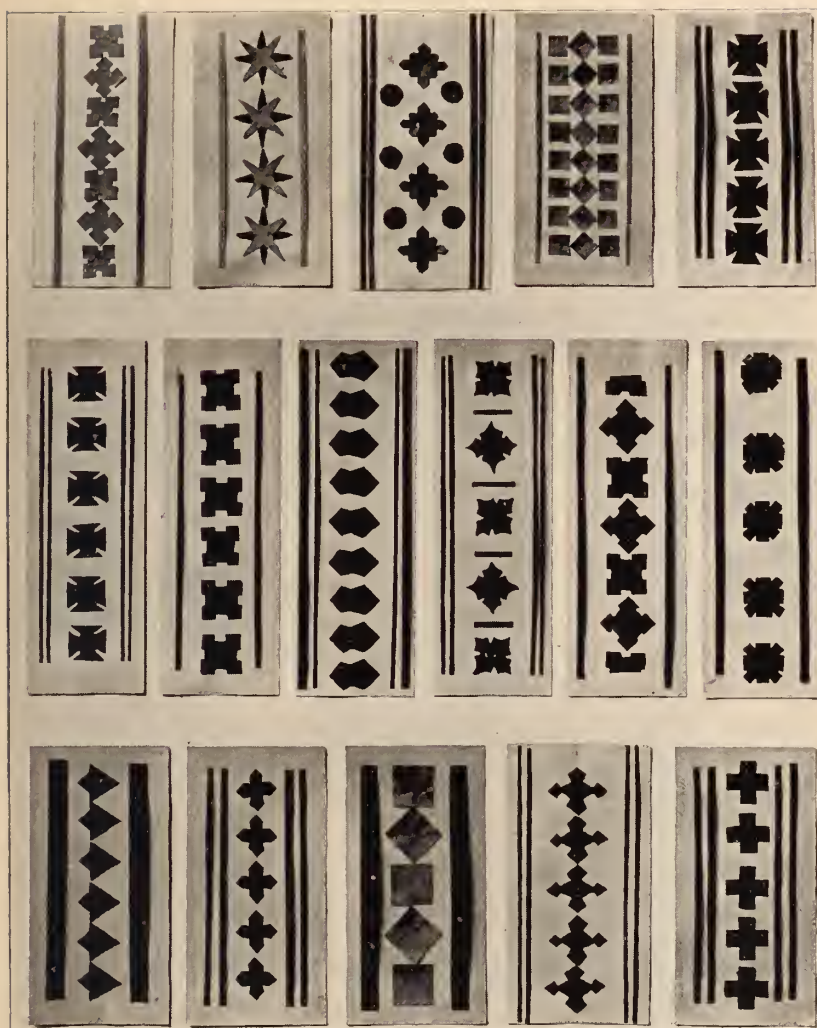
CLAY OBJECTS MADE A DEFINITE SIZE.

PLATE 12—THIRD YEAR.



ADDITIONAL EXAMPLES OF CLAY WORK.

PLATE 13—THIRD YEAR.



COLORS PAPER BORDERS FROM UNMODIFIED AND MODIFIED UNITS.

PLATE 14—THIRD YEAR

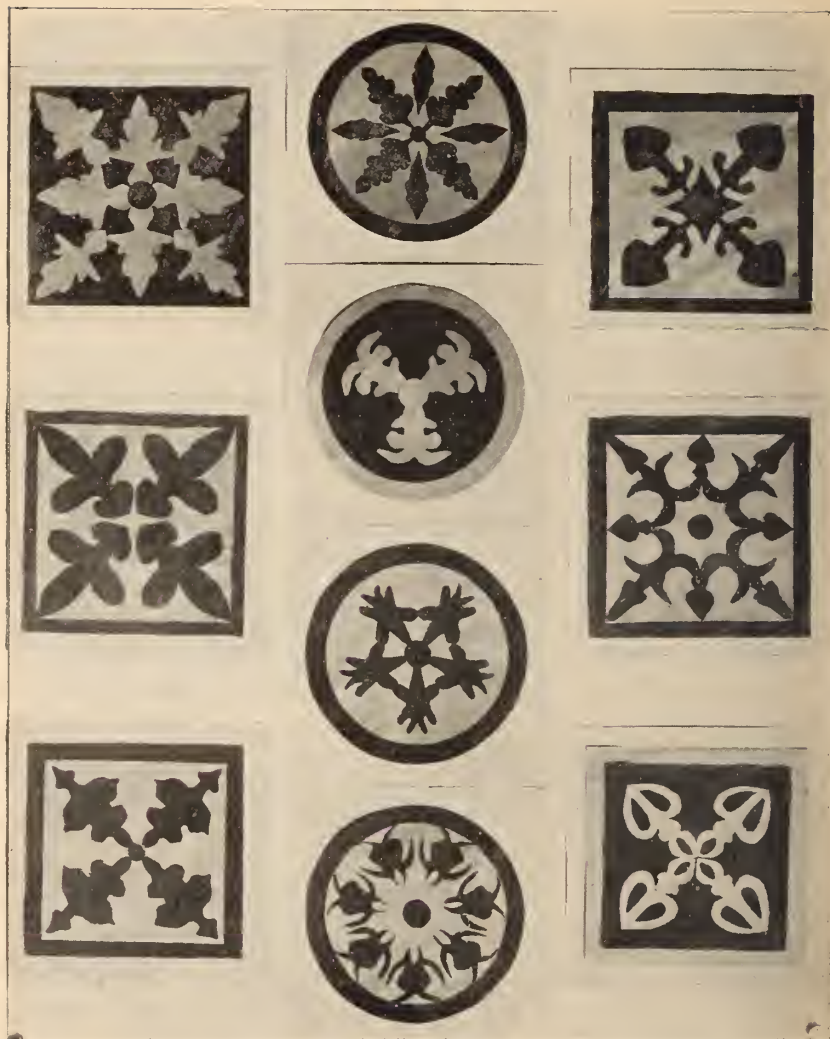
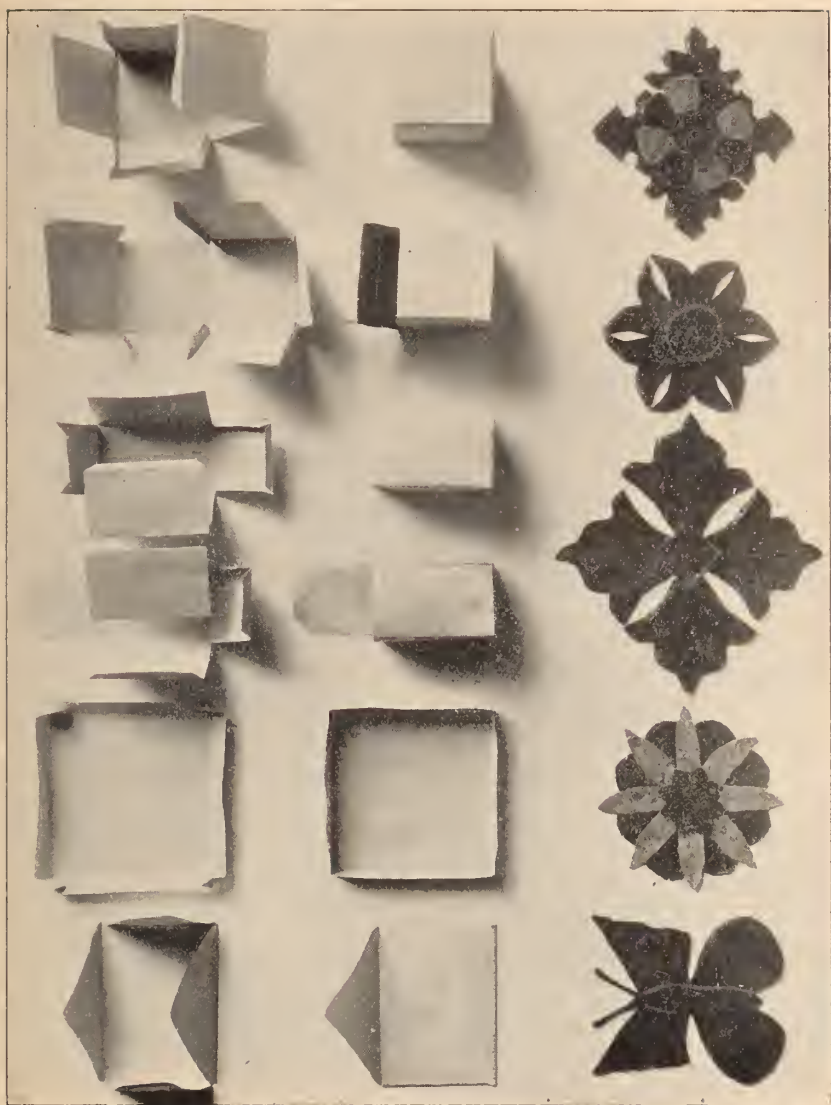
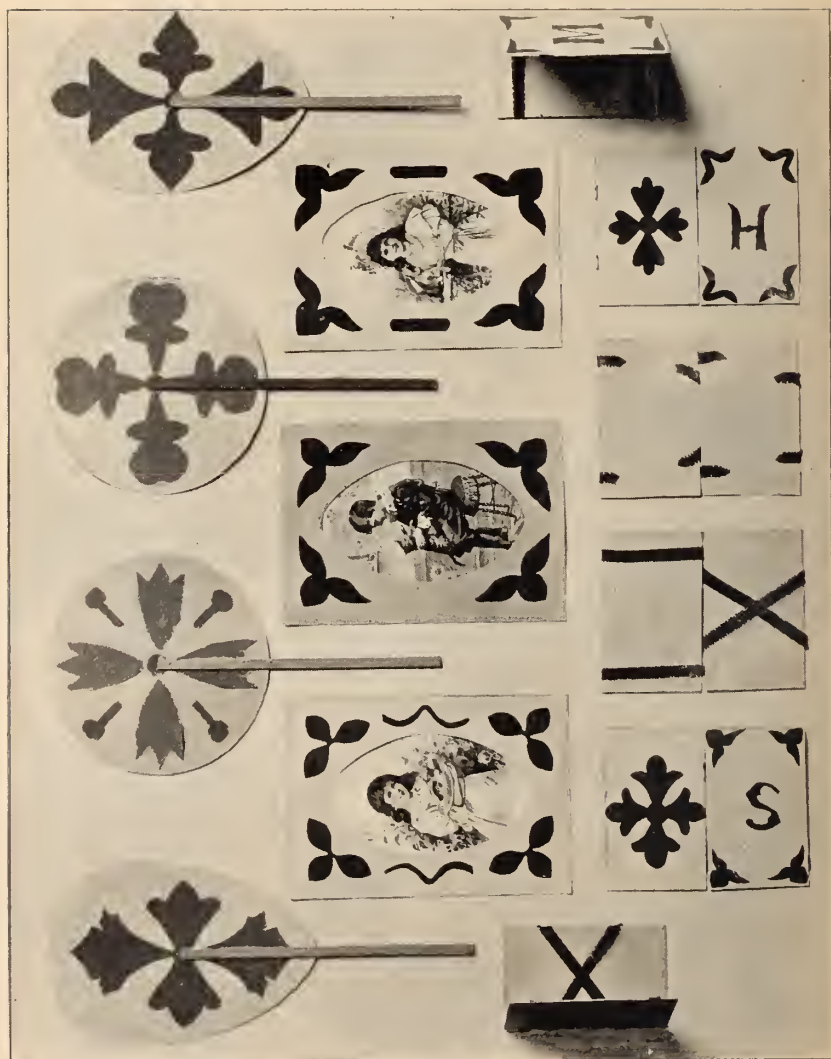
COLORED PAPER, RADIAL DESIGNS, USING
MODIFIED UNITS.

PLATE 15—THIRD YEAR.



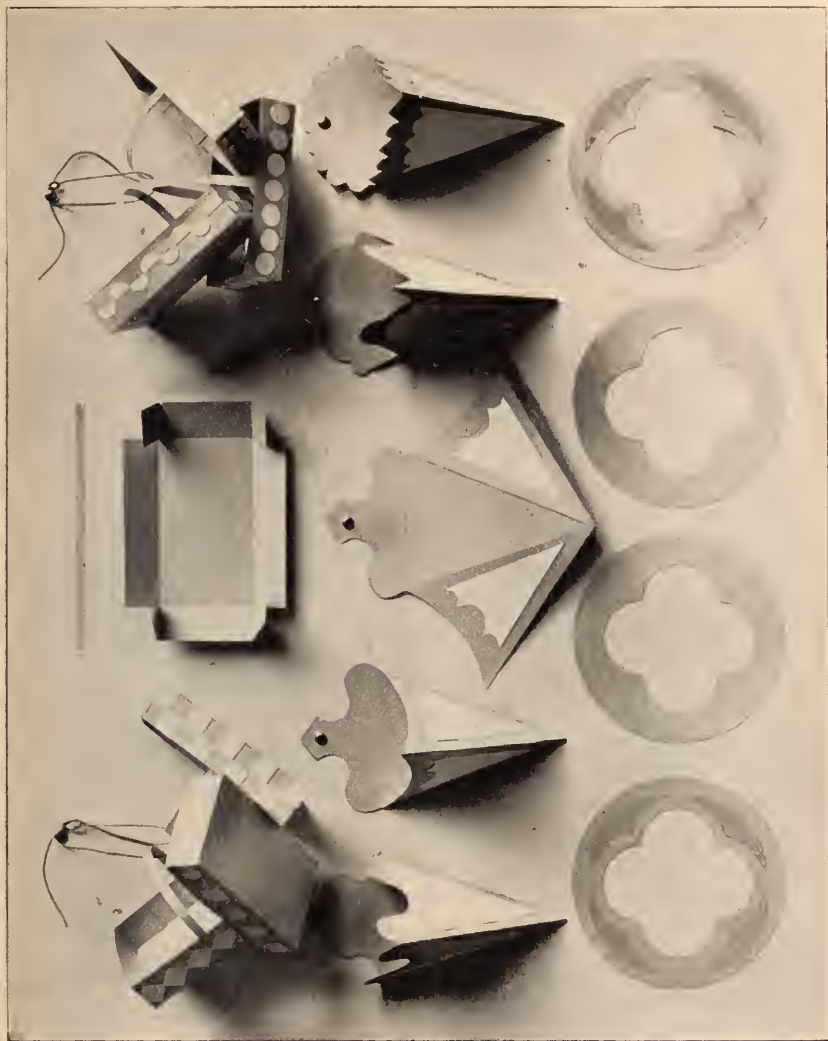
PATTERNS, SIMPLE OBJECTS MADE OF PAPER OR CLOTH.

PLATE 16—THIRD YEAR.



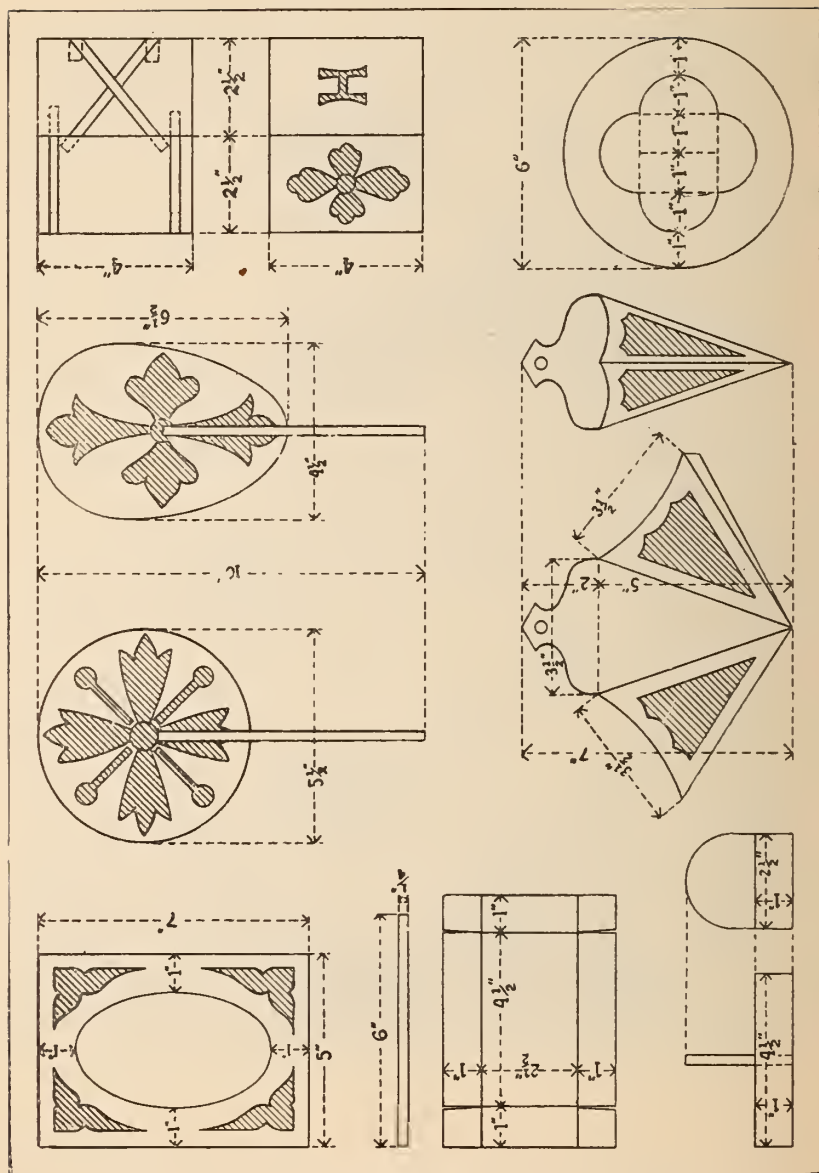
CARDBOARD OBJECTS DECORATED WITH COLORED PAPER.

PLATE 17—THIRD YEAR.



CARDBOARD OBJECTS PARTLY DESIGNED BY CHILDREN.

PLATE 18—THIRD YEAR.



WORKING DRAWINGS FOR CARDBOARD OBJECTS.

FOURTH YEAR.

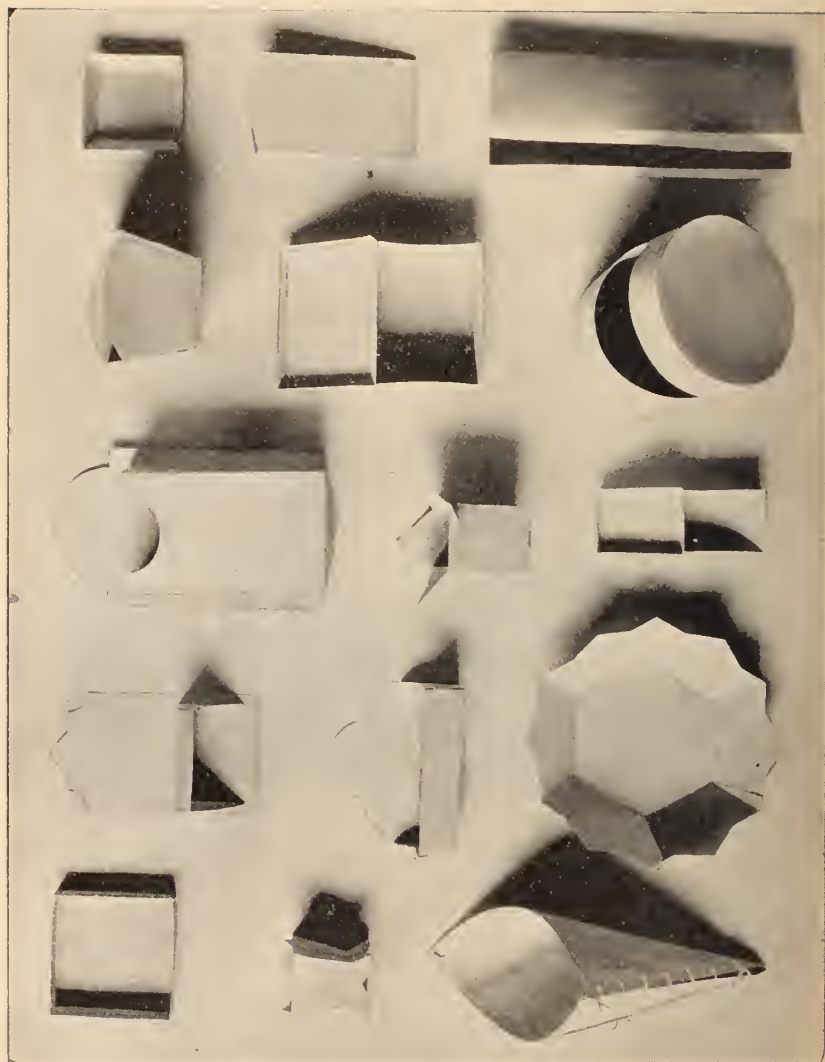
CARDBOARD WORK.

The fourth year work consists of patterns which are drawn on cardboard, then cut out and pasted into the forms shown in plate 19. The means found to give the best results in presenting the subject to a number of pupils is to have a large draw-



ing or chart of the pattern made on manilla paper, or tag, as it is sometimes called. This is quite durable, of a light brown color, and not easily soiled; it should not be glazed on account of the reflections, which give much trouble when present. The chart should be on a sheet about 24 inches by 30 inches, so that it can be seen at the greatest distance in the room. To have the proper carrying power the lines should be black and one-quarter of an inch in width. With what is called a "water-proof" pencil, made by the Graphite Pencil Co., they can easily be made so, as the lead is several times as large as that in ordinary pencils. This particular lead has the great advantage of giving a non-

PLATE 19—FOURTH YEAR.



EXERCISES IN CARDBOARD.

glazed line, differing therein from other pencils. The figures used to show the dimensions should be not less than one inch and one-half in height. In every particular except in size, the charts should be exactly the same as the drawings that the pupils are required to make, thereby giving them a good example, a thing which can not be too much emphasized. At this

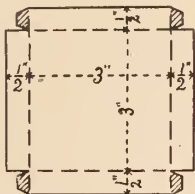


Fig. 1—Tack Tray.

stage of the work it has been found advisable not to have the pupils place the dimensions on their drawings, but merely to have them make their drawings to the sizes called for by the measurements placed on the teacher's chart. Figures 1, 2, 3 and 5 show working drawings as made on a chart, and figure 4 shows the pupil's copy ready to cut out.

The tools required for cardboard work and its accompanying drawing are:

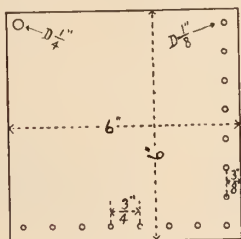


Fig. 2—Cornucopia.

Lead pencil, 2c.

Eraser, 2c.

Ruler, 1c.

Knife, 25c. to 50c.

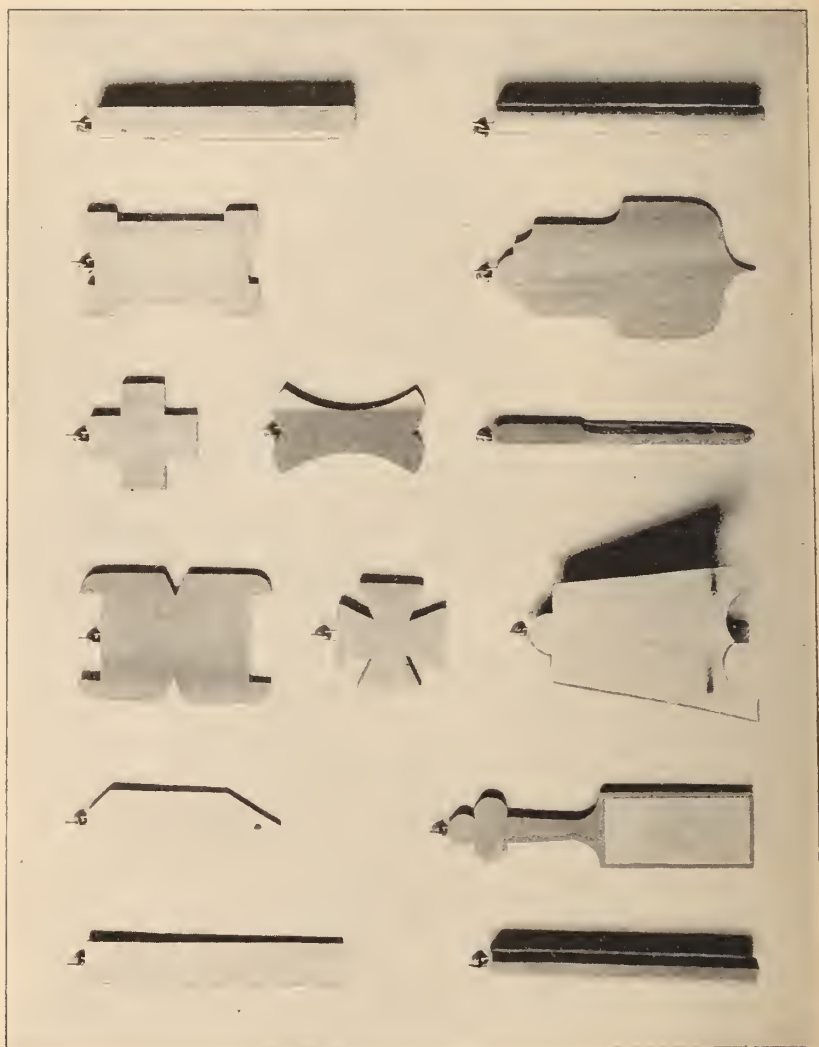
Scissors, 20c.

Compass, 15c.

Triangle, 5c.

Total cost per pupil for tools, not to exceed 95c.

PLATE 20—FIFTH YEAR.



EXERCISES IN WHITTLING.

This calculation is based on the supposition that each pupil has his own complete set, and has everything of the best, two things which are not absolutely necessary, as some of the tools will do for more than one pupil, and may be purchased at even a more moderate cost than quoted. The triangle may be either of wood or of very heavy pressboard, the latter being the better,

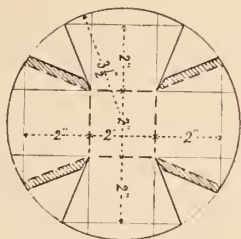


Fig. 3—Button Box.

as it does not break nor is it noisy; it is used to guide the pupils in making right angles, hence any card having perfectly square corners will serve the same purpose.

Accompanying each one of the teacher's charts should be the finished object, fastened to it with string for instance, so that the pupil can examine it himself, and see what the pattern will make when cut out and pasted together. The teacher's efficiency

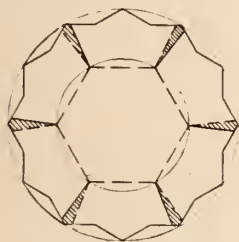


Fig. 4—Card Tray.

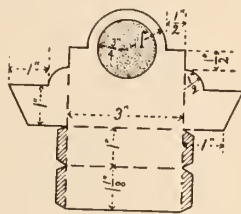


Fig. 5—Match Box.

will be materially increased in she makes the models herself, thus becoming familiar with the minor difficulties as well as with the greater ones.

If the pupils' drawings on the cardboard are not well enough made to cut out, practice should be required on drawing paper. When the drawings are successfully done, they should be copied or re-made on the cardboard, as in figure 4. If the teacher is not

familiar with the ability of her pupils in this line of work, it would be better to begin with the practice paper. When the pupil has reached the point where he can make a reasonably good drawing the first time he tries, or at least discover for himself most of his own mistakes, he may draw directly on the cardboard.

The cardboard found to be the most suitable for this kind of work is what is called 3-ply gray card. It may be purchased by those in the vicinity of Denver from E. A. Peters & Co., 1621 Blake street. For pasting there is nothing which equals LePage glue, as it will stick fast in a few seconds while the work is held between the fingers.

Very little explanation of the drawings seems necessary, as most of the details will be readily understood by a few moments' study of the illustrations given in this section and those following. However, a few suggestions may not be out of place.

The place where the cardboard is to be bent to form corners is designated by dash lines composed of three-eighths inch dashes and one-eighth inch spaces. After the outline has been cut these lines should be gone over or "scored" with the knife point cutting the material one-third through its thickness; it should then be bent away from the scored lines, leaving them and the pencil lines on the outside of the model. This will insure a sharp, square corner instead of a broken and bulging one.

The outlines may be cut with a knife but it is better to use the scissors. Where pasting-laps are needed they should be one-fourth of an inch in width. They are shown in the drawings by crossing them with parallel diagonal lines one-sixteenth of an inch apart. Inches are indicated by two marks resembling quotation marks as shown in the drawings, instead of writing out the word or abbreviating it. All dimension lines are composed of one-eighth inch dashes and one-eighth inch spaces with arrow heads placed at the ends of them to show exactly where the lines end. Extension lines are of the same kind as the dimension lines, and are used only to show the connection between the dimension lines and the drawings, therefore they are sometimes called connecting lines.

Outline,	_____
Score line,	_____
Dimension lines,	<— — — — 18'' — — — — —>
Connecting lines.	— — — — — — — — — —
Center lines,	— — — — — — — — — —

FIFTH YEAR.

WHITTLING.

Plate 20 shows some of the objects made in whittling, which is taken up in such a manner as to be adapted to the regular school room. The equipment consists of—

- Knife, 50c.
- Ruler, 1c.
- Try-square, 20c.
- Pencil, 2c.
- Eraser, 2c.
- Triangle, 5c.
- Compass, 15c.

Ninety-five cents per pupil will give each the entire set of tools of excellent quality. By a careful arrangement of classes some of the tools can be made to do duty for several persons, so that each pupil need not have a complete set.

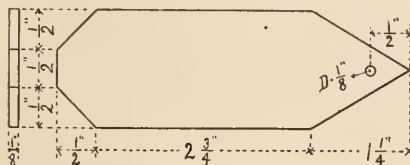


Fig. 6—Key Tag.

The subject is presented to the class by means of the charts described in the fourth year work and at this stage the pupil is required to make a working drawing of the model shown in the chart. The principal difference between this kind of work and cardboard work is that the objects are made of wood and consequently thickness must be represented, whereas in the pat-



tern work of the fourth year thickness is not considered. Compare the illustrations in the fourth year with those in the fifth year.

To show all of the dimensions, the thickness, width, and length of each object, two or more pictures or views of it are required, united by connecting lines, as shown in figure 6, and on this

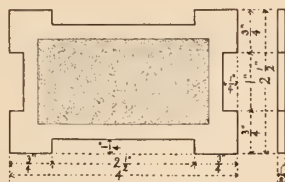


Fig. 7—Match Scratcher.

drawing are placed the dimensions so that it is complete and self-explanatory. After this is done to the teacher's satisfaction, the pupil is given a piece of wood a little wider and a little longer than the finished model and required to whittle it out. The wood should be of the exact thickness of the model, so that the pupil need not concern himself about that dimension, leaving only the outline to be cut.

The best woods to use for whittling are gum-wood, bass-wood, poplar, and pine, their order indicating their comparative worth. Pine splits too easily, while poplar hardens on exposure to the air to such a degree that it takes quite strong fingers and

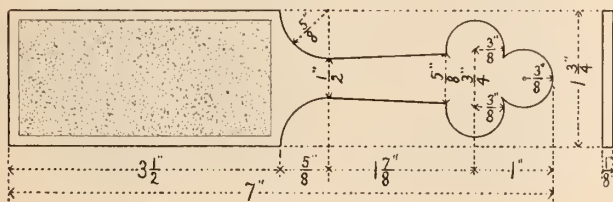


Fig. 8—Pencil Sharpener.

a sharp knife to do anything with it. Gum-wood and bass-wood are as good as anything of reasonable cost. This material should be obtained from a planing mill and ordered cut to sizes about one-half inch longer and wider than the exercises, and planed on both surfaces

While any stout knife of good quality will answer, the knives found to be the most satisfactory are those sold for this pur-

pose by Chandler & Barber, 15 Eliot street, Boston, and called by them "sloyd knives." They are of excellent temper and do not close, being a fixed, single-bladed knife. Any accurate four-

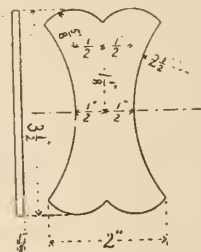


Fig. 9—String Bobbin.

inch try-square will do and may be obtained from the above mentioned firm or from almost any hardware store. Without knowing the exact arrangement of the classes it is impossible to give a very close estimate of expense. The figures given above are

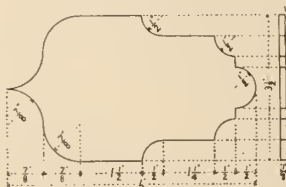


Fig. 10—Calendar Back.

the maximum and by arranging the classes properly and having more than one pupil use the same tool, the cost may be cut to one-fourth or even very much lower. Figures 6, 7, 8, 9 and 10 represent the drawing of this year's work.

SIXTH, SEVENTH AND EIGHTH GRADES.

BENCH WORK.

Beginning with the sixth year the pupils take up bench work, some of the results of which are shown in plates 21, 22 and 23. It is best taught by a teacher of special training, but may be carried on to more or less advantage to the pupils by the regular teacher if he will devote a little time to the study of suit-



able exercises, and the proper care and use of tools. There are many books published on the latter topics which give a very clear and comprehensive idea of them. A good deal of practical information to teachers who are unfamiliar with this line of work may be obtained from such books as "Bench Work in Wood," by W. F. M. Goss, published by Ginn & Co.; "Exercises in Wood Work," by Ivan Sickles, published by the Amer-

PLATE 21—SIXTH YEAR.



EXERCISES IN BENCH WORK.

ican Book Co., and "The Teacher's Hand Book of Sloyd," by Otto Solomon. This last is an English work.

The proper use of tools is of course one of the principal things in connection with this subject, but their care is not less

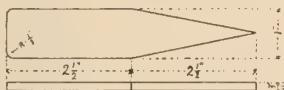


Fig. 11—Flower Label.

important. The pupils should be provided with benches and the following tools: Hammer, cross-cut saw, rip saw, try-square, gauge, jack plane, block plane, thumb tacks, pencil, compass,



eraser, 2-foot rule, knife, $\frac{1}{4}$ -inch chisel, $\frac{1}{2}$ -inch chisel, 1-inch chisel, Springfield drawing kit No. 2.

It is almost impossible to give any estimate of the cost per set as prices vary so much in different cities and with the

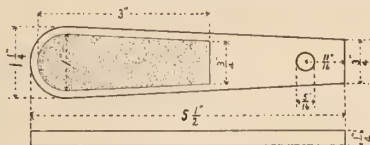
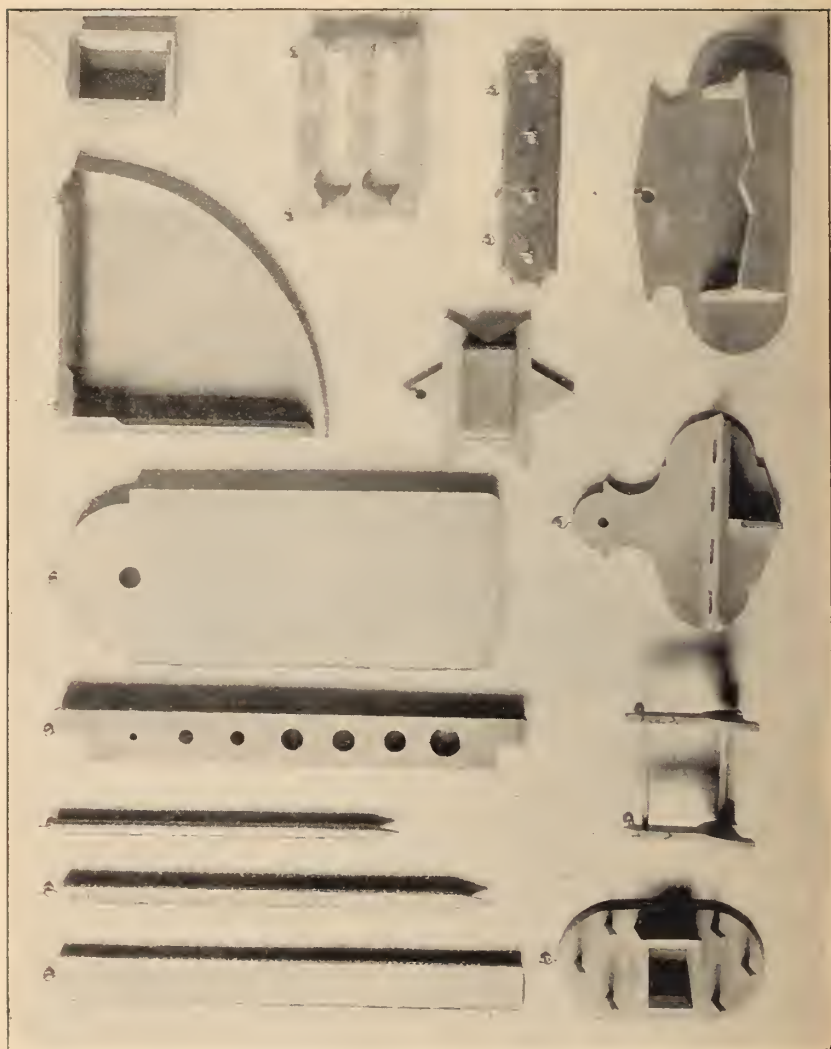


Fig. 12—Pencil Sharpener.

quality and quantity of the tools. Whatever tools are purchased should be of the very best quality, however, as they will wear until used up, while those of an inferior grade will become in-

PLATE 22—SEVENTH YEAR.



EXERCISES IN BENCH WORK.

accurate in a comparatively short time and are then worse than useless for teaching beginners. To the above set should be added some general tools, some that are not needed as frequently as the above and will do duty for quite a large class.



A good brace and full set of bits ranging in size from $\frac{3}{16}$ -inch to 1-inch, and varying by sixteenths. The Jennings bit is about the best.

Several half-round 10-inch wood files, and a key-hole saw.

There are several others which will be needed from time to

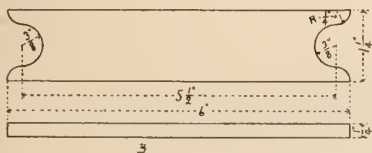


Fig. 13—Fish Line Winder.

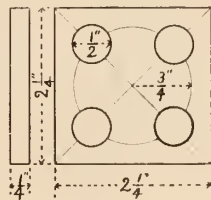


Fig. 14—Thread Bobbin.

time in a manual training room but are not directly connected with the exercises. Then there are small brads, and such things in the hardware line which are in demand daily.

The woods best suited to this particular class of work are: First, clear straight-grained pine, of the kinds known as white pine or sugar pine, and the best grade is none too good. Second, poplar, which is of a more dense grain and is therefore better for

the smaller models of the sixth year work, while pine is better adapted to the larger work of the eighth year.

The benches need not be of an expensive pattern. If they are firm and provided with good vises, bench-stops and places for tools, they will answer every purpose. It is well to have "a place for each thing and each thing in its place" in a room full of tools.

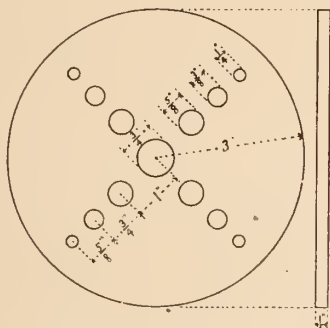


Fig. 15—Round Table Mat.

The models are hung on the wall in a place easily reached by the pupils who go from their places and measure the particular ones that they are to make. From the dimensions thus obtained each pupil is required to make a very complete working drawing, such as is shown in figure 11, 12, 13 or 14. These drawings are similar to those made in year five except for two things.

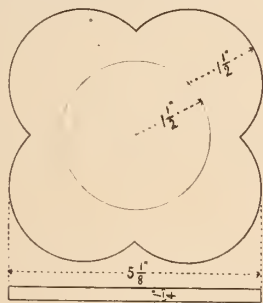


Fig. 16—Clover Leaf Table Mat.

The first difference is that in year five the drawing is a copy of the teacher's chart, while in these years the pupil must for the most part conceive his own drawing from the object and its dimensions, involving much more mental exertion on his part. In

this work the teacher should assist in such a manner that the pupil will learn to think out for himself the proper manner of placing the dimensions, where to use certain lines and all such details. The second difference is that the drawing outfit in year five is limited to the pencil, ruler and triangle, and here the drawing-board, T-square and triangles are brought into use.

Drawing has a very important part in manual training and must be given due attention. This work is by no means a simple training in carpentry.

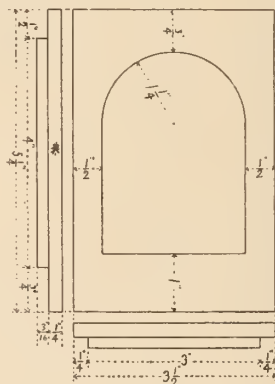


Fig. 17—Picture Frame.

When the pupil has completed a drawing of the model to the satisfaction of the instructor, he should obtain the right kind of wood of suitable size and proceed to make the object that his drawing represents, using the drawing as a guide in regard to size, etc.

The first step involved is making a working drawing from a model; the second step is to make a model from the working drawing.

ART IN THE KINDERGARTEN AND PRIMARY GRADES.

"FROM AN AMATEUR'S POINT OF VIEW."

(An address delivered before the twenty-second annual session of the Colorado State Teachers' Association, held in Denver, Colorado, December, 1896, by Grace Espy Patton.)

It is in the bright and glowing springtime of youth that characters are moulded—those beautiful days when

"All the breeze of Fancy blows,
And every dew-drop paints a bow;
The wizard lightnings deeply glow,
And every thought breaks out a rose."

Were it possible for us to wander back to the first dawn of consciousness, to that moment when our new born eyes first fall upon a world of substance, doubtless, to us, many of the mysteries of life would be revealed. But memory serves us not completely at all times. We forget the first joys of a realizing consciousness, a consciousness that realizes itself. We forget the pains of our infancy, and its sorrows and joys. There is a time, however, to which our memory does go back, and we stop to ponder over the years that intervene between that day, far off in the past, perhaps, and the present all glowing with the brilliancy of a grander era yet to be. We give way to introspection, and endeavor to determine what influences were brought to bear upon the plastic mind which served to develop the soul. Of those of us who are gathered here to-day, some will ascribe the influences to one thing, and some to another; but when, in the coming years, the question is put to the youth of to-day, they will give the kindergarten credit for having been the influential factor for good—outside of the home—in moulding their lives.

It is in childhood that we learn the ways of life. Well has it been said that the child is father to the man. Well was it under-

stood by the leaders of a great church organization, that if they could have the training of the child during the first seven years of his life that there was little danger of his wandering from their teachings.

Very rapidly are we evolving from the circumscribed realm of a materialistic age. Very rapidly are we all becoming converts to the doctrine of monism. Very rapidly are we all embracing the belief that every life is a microcosm, and that the evolution of the world of self must begin with the beginning of life.

This is not an era of materialistic endeavor alone. An education, these days, has some purpose other and higher than to feed our hunger and clothe our nakedness. The object of education is life itself, and life is something more than the mere holding together of body and mind. The physical is a manifestation of the soul. The soul is the one; and, through education, we learn to recognize unity in diversity.

The aim of education is to teach the proper understanding of life. The aim of education is not to produce only an exterior good, but an internal condition of excellence.

I trust that the foregoing remarks indicate what I regard to be the scope of education, and now to touch more closely upon the subject in hand. I take it for granted that we are one in the belief that art should have a place in the kindergarten and in the primary grades.

The child in the kindergarten has not learned to distinguish the canvas, glowing with beauty from the hand of the master, from the gorgeously tinted chromo. He has not learned of the importance of the background and foreground effects, and often incongruous elements please his uncultured taste.

I come before you to-day, making no claims to being a professional, or a connoisseur in art; but as an amateur, were I called upon to teach art in the kindergarten and in the primary grades, I should begin by teaching nature, and all the way from the kindergarten through the grades to the high school and through the high school, the college, and the university. I should teach art through the great medium of nature; I should teach it in the pictures painted upon the canvas of the heavens by the rising and the setting sun; in the landscapes that stretch away and away to the east; in the mountains that rear their heads high in air; in the waters, blue and clear and sparkling, as they ripple along over the rocks in the cañon's bed; in the great canopy overhead, studded by stars and lighted by sun and satellite. I should teach art in the poems of the ages, and place viv-

idly before the mind's eye the pictures contained in the songs of the warblers, as in the following:

"Leafless are the trees; their purple branches
Spread themselves abroad, like reefs of coral, rising silent
In the red sea of the winter sunset."

I should teach art in the pictures of the times and in the masterpieces of the ages. I should teach art in the buildings that adorn our city streets; the church spires; and the turrets and towers that lift their heads skyward. I should teach the child to admire the beautiful in architecture, so that, when he becomes a man, he will avoid the incongruous and grotesque in designing his dwelling house.

I sometimes wonder if our system of object teaching does not keep the mind grovelling too much among sensuous pleasures rather than revelling among the pure delights of the higher life. "The true object of teaching is to inspire the pupil with a longing for what is truest, best, and most beautiful in life." The study of the fine arts makes us better able to live the higher life, better able to appreciate its beauty. After all, art is but nature arrayed in the robes of human reason and human endeavor, and is an indication of the soul's aspirations.

The study of art makes us better Christians. When we go into the vast cathedral and listen to the swelling tones of the grand organ, our soul is moved to reverence, and our thoughts rise to higher things.

The other day I stood at my window looking over the morning world. A roseate flush was in the southern sky, and as I directed my gaze eastward, I beheld the horizon all glorious with the golden glow of coming day. I saw a picture such as mortal mind never originated, such as human hand never wrought upon the canvas. I see it yet, beautiful, golden, purple, red, radiant, the colors harmoniously blended, a picture which all should see and marvel at and study, a picture all glowing with life and beauty and divinity. I see it yet. It is mine, that picture all beautiful. To me it is, indeed, "A thing of beauty and a joy forever."

My mind is my art gallery; no vandal can raze the building, no desecrating hand can mar the painted canvas hung upon its walls.

The learning and the lore of the ages are at our command. The whole world is ours. Nothing exists but for us.

Let us teach the children that they own the universe; that the beauty of the glorious sunrise is theirs, that the colors of the rising and setting sun all belong to them. Let us develop the whole self, the whole being, for

“Like warp and woof all destinies
Are woven fast,
Linked in sympathy like the keys
Of an organ vast.

Pluck one thread, and the web ye mar;
Break but one
Of a thousand keys, and the paining jar
Through all will run.”

INDEX.

INDEX.

A

	Page.
Accessioning books.....	440
Accredited high schools for admission to the State University..	392
Act establishing Arbor Day.....	241, 245
Act in relation to the sale or gift of tobacco to children under sixteen years of age.....	19
Agricultural College—	
Additional endowment by the general government.....	259
Courses of study.....	260
Enrollment statistics.....	269
Experiment station.....	263
Finances	280
Grounds and buildings.....	275
Inventory	265
Military instruction.....	284
“Morrill bills”.....	298
Names of instructors.....	260
Purpose of government aid.....	259
Needs	295
Report of president.....	267
State board of agriculture....	259
Agricultural College library.....	448
An annual index.....	466
Annual Meetings—	
Association of County Superintendents.....	408
Colorado State Teachers' Association.....	381
Appropriation and expenses.....	94

Apportionment—	Page.
For the year 1897.....	88
For the year 1898.....	91
Arapahoe County—	
Report of Superintendent for the year 1898.....	108
Arbor Day Circular—	
For the year 1897.....	243
For the year 1898.....	247
Arbor Day Proclamation—	
For the year 1897.....	241
For the year 1898.....	245
Art in the kindergarten and primary grades.....	554
Association of County Superintendents—	
Programme—	
1897	408
1898	410
Subjects for round table discussion.....	408
A university library and its work.....	448

B

Beginning a school library.....	445
Bible, in reference to.....	119
Binding library books.....	442
Bonds	119
Boulder County—	
Report of superintendent for the year 1897.....	97
Report of superintendent for the year 1898.....	109
Bulletins—	
Arbor Day, 1897—	
Act establishing.....	241
Circular	243
Proclamation	241
Arbor Day, 1898—	
Act establishing.....	245
Circular	247
Proclamation	245

Bulletins—Continued.	Page.
George Washington birthday anniversary.....	252
La Fayette memorial day.....	249
Buckingham library, University of Colorado.....	448

C

Canon Ladies' Library Association.....	450
Cataloguing library books.....	441
Census—	
For the year 1897.....	48
For the year 1898.....	51
Certificates	120
Cheap books and government publications.....	470
Classifying library books.....	440
Clear Creek County—	
Report of superintendent for the year 1897.....	97
Colorado College library.....	450
Colorado's exhibit at the Omaha exposition.....	21
Colorado Library Association.....	424, 437, 458
Colorado libraries.....	437
Colorado library law.....	433
Colorado Springs public library.....	452
Colorado State Teachers' Association—	
Accredited high schools for admission to the State University	392
Announcements, 1896.....	381
Constitution and by-laws.....	401
List of members.....	392
Programme—	
1896	382
1897	387
Colorado State Teachers' Reading Circle.....	23
Conference of state superintendents.....	20
Costilla County—	
Report of superintendent for the year 1898.....	109

County Examination Questions—	Page.
December 18-19, 1896.....	145
March 19-20, 1897.....	150
August 20-21, 1897.....	156
December 17-18, 1897.....	162
March 18-19, 1898.....	168
August 19-20, 1898.....	174
County high school.....	121
County superintendents.....	121
County Superintendents of Schools—	
List of.....	211
County teachers' examination.....	14

D

Decisions of the State Superintendent—	
Bible	119
Bonds	119
Certificates	120
County high school.....	121
County superintendents.....	121
Districts	122
General fund.....	123
Holidays	123
Kindergarten teachers.....	124
Normal institute conductors' certificates.....	125
Organization of new districts.....	125
Real estate.....	125
Residence	127
School directors.....	127
School houses.....	134
Special meetings.....	134
Taxes	134
Teachers	136
Tie vote.....	136
Vaccination	136
Year	137

	Page.
Denver city library.....	452
Denver public library.....	453
Directions to applicants for county teachers' certificate.....	143
Disbursements—	
For the year 1897.....Insert after page	79
For the year 1898.....Insert after page	79
District normal reports.....	223
Districts	122
Dolores County—	
Report of superintendent for the year 1897.....	97
Report of superintendent for the year 1898.....	110
Douglas County—	
Report of superintendent for the year 1897.....	99
Report of superintendent for the year 1898.....	111

E

Eagle County—	
Report of superintendent for the year 1897.....	99
Report of superintendent for the year 1898.....	111
Enrollment and Attendance—	
For the year 1897.....	54
For the year 1898.....	57
Examination for admission to the bar.....	21
Examination of Teachers—	
For the year 1897.....	84
For the year 1898.....	86
Examination Questions—	
County—	
December 18 and 19, 1896.....	145
March 19 and 20, 1897.....	150
August 20 and 21, 1897.....	156
December 17 and 18, 1897.....	162
March 18 and 19, 1898.....	168
August 19 and 20, 1898.....	174
Directions to applicants for teachers' certificate.....	143
Regulations governing examination of teachers.....	141

Examination Questions—Continued.	Page.
State—	
August 25-27, 1897.....	181
August 24-26, 1898.....	193
State of candidate.....	180
Kindergarten—	
August 25, 26.....	207
Personal questions.....	207
Executive committees, normal districts.....	219

G

General fund.....	123
George Washington birthday anniversary.....	252
Gilpin County—	
Report of superintendent for the year 1897.....	99
Report of superintendent for the year 1898.....	111
Grant County—	
Report of superintendent for the year 1897.....	100
Gunnison County—	
Report of superintendent for the year 1898.....	112

H

High schools vs. grades.....	14
Holidays	123

I

Indexes, Public library, Denver.....	466
Industrial School for Boys—	
Acknowledgments	360
Difficulties	359
Discipline	359
Exhibit "A"—	
Number of inmates received each month.....	361
Exhibit "B"—	
Length of sentences.....	362
Exhibit "C"—	
Counties from which boys have been received.....	362

Industrial School for Boys—Continued.	Page.
Exhibit "D"—	
Ages when received.....	363
Exhibit "E"—	
Nativity of boys.....	364
Exhibit "F"—	
Nativity of parents.....	365
Exhibit "G"—	
Offenses for which committed.....	365
Exhibit "H"—	
Social condition of boys received.....	366
Exhibit "I"—	
Scholarship when received.....	366
Exhibit "J"—	
Religious denominations.....	367
Exhibit "K".....	367
Exhibit "L"—	
Work performed in printing department.....	368
Exhibit "M"—	
Work performed in tailoring department.....	368
Exhibit "N"—	
Work performed in carpenter department.....	369
Exhibit "O"—	
Work performed in shoe department.....	370
Exhibit "P"—	
Work performed in blacksmithing and engineering departments	370
Exhibit "Q"—	
Work performed in laundry department.....	371
Exhibit "R"—	
Fruits, vegetables, etc., produced on farm.....	372
Exhibit "S"—	
Fruits and vegetables put up for use of school.....	373
Exhibit "T"—	
Milk, butter, eggs, pork and veal produced on farm....	374
Exhibit "U"—	
Number of head of stock, fowls, etc.....	374

Industrial School for Boys—Continued.	Page.
Exhibit "V"—	
Cash receipts.....	374
Exhibit "W"—	
Expenditures under the different accounts.....	375
Expenditures and receipts.....	349
Health of inmates.....	358
Library	357
Manual training.....	356
Movement of population.....	348
Music, band, etc.....	357
Needs	351, 353
Physician's report.....	361
Recapitulation	375
Recreation	358
Religious and moral instruction.....	358
Superintendent's report.....	351
Trade schools.....	355
Industrial School for Girls.....	376
Introduction to state superintendent's report.....	9

J

Jefferson County—

Report of county superintendent for the year 1898.....	112
--	-----

K

Keeping accounts of books lent.....	443
Kindergarten examination questions.....	207
Kindergarten work.....	205
Kindergarten teachers.....	124

L

Lafayette memorial day.....	249
Lafayette's prayer.....	251

Libraries; Their Establishment and Management—	Page.
Accessioning books.....	440
Agricultural College library.....	448
An annual index.....	466
A university library and its work.....	448
A word on magazine clubs.....	464
Beginning a school library.....	445
Binding	442
Buckingham library, University of Colorado.....	448
Canon Ladies' Library Association.....	450
Cataloguing	441
Cheap books and government publications.....	470
Colorado College library.....	450
Colorado libraries.....	437
Colorado Library Association.....	437, 458
Colorado library law.....	433
Colorado Springs public library.....	452
Classifying	440
Denver city library.....	452
Denver public library.....	453
Indexes, public library, Denver.....	466
Keeping accounts of books lent.....	443
Library laws of Colorado.....	428
Magazines in the schools.....	468
Manufacturers' catalogues.....	469
McClelland's public library, Pueblo.....	454
Montclair public school library.....	457
Monte Vista Library Association.....	456
Monthly index to periodicals.....	466
Montrose public school library.....	456
N. P. Coburn library of Colorado College.....	451
Popular books of fiction for young folks.....	461
Popular books (not fiction) for young folks.....	462
Public libraries.....	468
Public libraries in America.....	469
Preparing books for the shelves.....	442

Libraries—Continued.	Page.
Reference books for common schools.....	460
School room libraries.....	446
State Normal School library.....	457
State library.....	437
Ten popular monthlies.....	464
Ten popular weeklies.....	465
The Library Journal.....	469
Trinidad free public library.....	457
"Union list of periodicals".....	463
Young folks library, La Junta.....	454
Young people, the schools and the library.....	444
Library laws of Colorado.....	428
Lincoln County—	
Report of county superintendent for the year 1898.....	112
Logan County—	
Report of county superintendent for the year 1897.....	100
Report of county superintendent for the year 1898.....	113

M

Magazine clubs.....	464
Magazines in the schools.....	468
Manual Training for Eight Years—	
Introduction	506
Preface	507
First Year—	
Color	513
Cutting and making designs of colored paper.....	513
Exercises in paper folding.....	511
Modeling	509
Principles of design to be expressed.....	513
Second Year—	
Additional exercises.....	521
Color	519
Cutting and making designs of colored paper.....	518
Exercises in folding.....	518
Modeling	518

Manual Training for Eight Years—Continued.	Page.
Third Year—	
Cutting and making designs.....	526
Making and decorating cardboard objects.....	527
Making simple objects of papers—patterns.....	527
Modeling	525
Fourth Year—	
Cardboard work.....	537
Fifth Year—	
Whittling	543
Sixth, Seventh and Eighth Grades—	
Bench work.....	547
Plates—	
Plate 1—First Year—	
Type solids made of clay.....	510
Plate 2—First Year—	
Common objects based on type solids, made of clay	512
Plate 3—First Year—	
Exercises in paper folding.....	514
Plate 4—First Year—	
Exercises in paper folding.....	515
Plate 5—First Year—	
Cutting and making designs of colored paper.....	516
Plate 6—First Year—	
Cutting and making designs of colored paper....	517
Plate 7—Second Year—	
Type solids made of clay.....	520
Plate 8—Second Year.	
Common objects made of clay.....	522
Plate 9—Second Year—	
Designs cut and made from colored paper.....	523
Plate 10—Second Year—	
Designs, objects and patterns represented by col- ored paper.....	524
Plate 11—Third Year—	
Clay objects made a definite size.....	529

Manual Training for Eight Years—Continued.	Page.
Plate 12—Third Year—	
Additional examples of clay work.....	530
Plate 13—Third Year—	
Colored paper borders from unmodified and modified units.....	531
Plate 14—Third Year—	
Colored paper, radial designs, using modified units	532
Plate 15—Third Year—	
Patterns, simple objects made of paper and cloth	533
Plate 16—Third Year—	
Cardboard objects decorated with colored paper..	534
Plate 17—Third Year—	
Cardboard objects partly designed by children...	535
Plate 18—Third Year—	
Working drawings for cardboard objects.....	536
Plate 19—Fourth Year—	
Exercises in cardboard.....	538
Plate 20—Fifth Year—	
Exercises in whittling.....	540
Plate 21—Sixth Year—	
Exercises in bench work.....	548
Plate 22—Seventh Year—	
Exercises in bench work.....	550
Plate 23—Eighth Year—	
Exercises in bench work.....	552
Manufacturers' catalogues.....	469
McClelland public library, Pueblo.....	454
Meetings of normal district institutes.....	217
Mesa County—	
Report of superintendent for the year 1897.....	101
Report of superintendent for the year 1898.....	113
Mineral County—	
Report of superintendent for the year 1898.....	113
Montclair public school library.....	457

	Page.
Monte Vista Library Association.....	456
Montezuma County—	
Report of superintendent for the year 1897.....	100
Report of superintendent for the year 1898.....	113
Monthly index to periodicals.....	466
Montrose County—	
Report of superintendent for the year 1897.....	100
Montrose public school library.....	456
Morgan County—	
Report of superintendent for the year 1897.....	101

N

Normal District Institutes—	
Certificates issued.....	221
Executive committees.....	219
Meetings	217
Reports	223
Normal institutes.....	15
Normal institute certificates issued.....	221
Normal institute conductors' certificates.....	125
Normal School—	
Annual statement.....	303
Board of trustees.....	302
Course of study.....	298
Faculty	302
Financial statement.....	307
Function	297
History	296
Needs	297
Term scheduled.....	301
N. P. Coburn library of Colorado College.....	451

O

Organization of new districts.....	125
Otero County—	
Report of superintendent for the year 1897.....	101

P

Park County—	
Report of superintendent for the year 1897.....	103
Per Capita Expenses and School Houses—	
For the year 1897.....	68
For the year 1898.....	71
Persons who have received state certificates.....	36
Phillips County—	
Report of superintendent for the year 1898.....	114
Preparing library books for the shelves.....	442
Professionalism	13
Popular books of fiction for young folk.....	461
Popular books (not fiction) for young folk.....	462
Public libraries.....	468
Public libraries in America.....	469
Pueblo County—	
Report of superintendent for the year 1897.....	103

R

Real estate.....	125
Receipts—	
For the year 1897.....	74
For the year 1898.....	77
Recommendations of the Educational Committee of the State Federation of Woman's Clubs of Colorado, and Reports of Clubs—	
Ethics in the schools.....	417
Mothers' meeting topics.....	417
Report of educational committee.....	419
Recommendations to the legislature.....	43
Reference books for common schools.....	460
Regulations governing county examination of teachers.....	141
Reports of County Superintendents—	
For the Year 1897—	
Boulder county.....	97
Clear Creek county.....	97

Reports of County Superintendents—Continued.

For the Year 1897—Continued.

Page.

Dolores county.....	97
Douglas county.....	99
Eagle county.....	99
Gilpin county.....	99
Grand county.....	100
Logan county.....	100
Montezuma county.....	100
Montrose county.....	100
Morgan county.....	101
Mesa county.....	101
Otero county.....	101
Park county.....	103
Pueblo county.....	103
Routt county.....	103
San Juan county.....	104
San Miguel county.....	104
Summit county.....	105
Weld county.....	105
Yuma county.....	107

For the Year 1898—

Arapahoe county.....	108
Boulder county.....	109
Costilla county.....	109
Dolores county.....	110
Douglas county.....	111
Eagle county.....	111
Gilpin county.....	111
Gunnison county.....	112
Jefferson county.....	112
Lincoln county.....	112
Logan county.....	113
Mesa county.....	113
Mineral county.....	113
Montezuma county.....	113

Reports of County Superintendents—Continued.

For the Year 1898—Continued.	Page.
Phillips county.....	114
San Juan county.....	114
San Miguel county.....	114
Sedgwick county.....	115
Weld county.....	115
Yuma county.....	115

Report of the State Superintendent—

Act in relation to the sale or gift of tobacco to children under sixteen years of age.....	19
Colorado's exhibit at the Omaha exposition.....	21
Colorado State Teachers' Reading Circle.....	23
Conference of state superintendents.....	20
County teachers' examinations.....	14
Examination for admission to the bar.....	21
High school vs. grades.....	14
Introduction	9
Normal institutes.....	15
Persons who have received state certificates.....	36
Professionalism	13
Recommendations to the legislature.....	43
Rural schools.....	11
School directors.....	10
State board of education.....	26
State board of examiners.....	16
State course of study.....	12
State library.....	40
Teachers	15
Residence	127
Routt County—	
Report of superintendent for the year 1897.....	103
Rural schools.....	11

S

San Juan County—

Report of superintendent for the year 1897.....	104
Report of superintendent for the year 1898.....	114

San Miguel County—	Page.
Report of superintendent for the year 1897.....	104
Report of superintendent for the year 1898.....	114
School Bond Account—	
Report of Superintendent for the year 1897.....	80
Report of Superintendent for the year 1898.....	82
School directors.....	10, 127
School for the Deaf and Blind—	
Attendance	334
Blind department.....	342
Changes	338
Course of study.....	344
Graduates	337
Growth of oral teaching.....	339
Health	337
Industrial department.....	347
Musical department.....	343
Reorganization of oral department.....	340
Special pupils.....	341
School houses.....	134
School Room Decorations—	
Blackboard drawing.....	482
Boards or paper stock for mounting.....	477
Books	488
Color	478
Color as it seems to affect us.....	478
Contrast	482
Directory—materials and dealers.....	501
Draperies	489
Exhibitions	490
General admonitions.....	488
Model school room.....	490
Personality and integrity.....	478
Picture framing.....	491
Pictures	476
Plaster casts.....	488
Portfolios	489

School Room Decorations—Continued.	Page.
Poverty	497
Programmes	495
Timidity and lack of confidence.....	477
Vases and flower boxes.....	495
Window gardens.....	497
School room libraries.....	446
Sedgwick County—	
Report of superintendent for the year 1898.....	115
Special meetings.....	134
State board of education.....	26
State board of examiners.....	16
State course of study.....	12
State Educational Institutions—	
Agricultural College.....	257
Industrial School for Boys.....	348
Industrial School for Girls.....	376
Normal School.....	296
School for the Deaf and Blind.....	334
University of Colorado.....	309
State Examination Questions—	
August 25-27, 1897.....	181
August 24-26, 1898.....	193
State library.....	40, 437
State Normal School library.....	457
Statement of candidate for state examination.....	180
Statistical Reports—	
Apportionment—	
For the year 1897.....	88
For the year 1898.....	91
Appropriation and expenses.....	94
Census—	
For the year 1897.....	48
For the year 1898.....	51
Disbursements—	
For the year 1897.....	Insert after page 79
For the year 1898.....	Insert after page 79

Statistical Reports—Continued.	Page.
Enrollment and Attendance—	
For the year 1897.....	54
For the year 1898.....	57
Examination of Teachers—	
For the year 1897.....	84
For the year 1898.....	86
Per Capita Expenses and School Houses—	
For the year 1897.....	68
For the year 1898.....	71
Receipts—	
For the year 1897.....	74
For the year 1898.....	77
School Bond Account—	
For the year 1897.....	80
For the year 1898.....	82
Teachers and Salaries—	
For the year 1897.....	60
For the year 1898.....	64
Summit County—	
Report of superintendent for the year 1897.....	105

T

Taxes	134
Teachers	15, 36
Teachers and Salaries—	
For the year 1897.....	60
For the year 1898.....	64
Ten popular monthlies.....	464
Ten popular weeklies.....	465
The library journal.....	469
Tie vote.....	136
Trinidad free public library.....	457

U

	Page.
Union list of periodicals.....	463
University of Colorado—	
Attendance	310
Buildings and grounds.....	316
Building fund report.....	326
School of liberal arts.....	312
Colorado school of music.....	316
Departments	310
Graduate courses.....	311
Inventory	331
Librarian's report.....	329
Needs	317
Pay roll.....	321
Preparatory school.....	315
Relations to the state.....	320
Report of regents.....	309
Secretary's report... ..	327, 328
School of applied science.....	313
School of law.....	315
School of medicine.....	314
Treasurer's report.....	326

V

Vaccination	136
-------------------	-----

W

Weld County—	
Report of superintendent for the year 1897.....	105
Report of superintendent for the year 1898.....	115

Y

Young folks library, La Junta.....	454
Young people, the school and the library.....	444

Yuma County—

Page.

Report of superintendent for the year 1897.....	107
Report of superintendent for the year 1898.....	115

